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## CONTENTS


**GRADUATE COURSE IN CANCER**

Early Diagnosis and Prophylaxis in Female Genital Cancer. *William P. Graves* ..... 1

Clinic of the Free Hospital for Women.
Cancer Female Genital Tract. *W. P. Graves.* 7
Cancer of the Breast. *F. A. Pemberton* ..... 7
Lead Treatment for Cancer. *George V. Smith* 7

Cancer of the Female Genital Tract. *Louis E. Phaneuf* ..... 8

Carcinoma of the Female Genital Tract. *Joe V. Meigs* ..... 9

**THE NEW HAMPSHIRE MEDICAL SOCIETY**

Tumors of Bone. *Dean Lewis* ..... 11

Miscellany ..... 17

**NEW ENGLAND MEDICAL COUNCIL**

Education of the Specialist. *J. J. Cobb* ..... 21

The Needs and Opportunities of Specialists. *William G. Ricker* ..... 22

**CASE RECORDS OF THE MASSACHUSETTS GENERAL HOSPITAL**

Case 16011—Multiple Peripheral Venous Thrombosis. *Richard C. Cabot, George W. Holmes* and *Tracy B. Mallory.* Case 16012—Blow on Abdomen. Question of "Internal Injuries." *Torr Wagner Harmer* ..... 32

**EDITORIALS**

Invasion of the Meninges and the Brain by Infections Passing Upwards from the Nasal Cavity ..... 38

Cancer Parasites Again ..... 39

The Campaign for Funds for the Boston Medical Library and the Massachusetts Medical Society Is Handicapped by Confusion ..... 39

This Week's Issue ..... 39


*(Contents continued on next page)*


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# CONTENTS

*(Continued)*

THE DOCTOR'S SADDLE BAG
The New Year Resolution ..... 40

MASSACHUSETTS LEGISLATIVE NOTES ..... 41

BOOK REVIEW
Haemorrhoids. Arthur S. Morley ..... 56

CORRESPONDENCE
Articles Not Acceptable for New and Non Official Remedies ..... 51
The Change of the Name of the Massachusetts Homoeopathic Hospital. H. M. Pollock ..... 50
Reregistration of Physicians ..... 49
Resolutions Respecting Federal Airplane Pilots' Licenses. L. H. Bauer ..... 50

MISCELLANY
The Annual Meeting of Members of the Corporation and of the Board of Directors of the Gorgas Memorial Institute of Tropical and Preventive Medicine, Inc. ..... 46
Comparison of Disease Incidence in Connecticut with 1928 and Seven Year Average Month Ending December 14, 1929 ..... 44
Diagnosis Centre for Cancer Urged in New York ..... 31
The Disgrace of Smallpox ..... 19
Good Blood and Bad ..... Advertising Section vi
The International Urological Society ..... 49
Proposed George Robert White Health Unit ..... 49
Résumé of Communicable Diseases in Massachusetts, November, 1929 ..... 44
The Rockefeller Institute for Medical Research. 37
Sickness Among Industrial Employees During the First Three Months of 1929 ..... 45
The Supply of Physicians in Maine. Clarence F. Kendall ..... 37
Tuberculosis Abstracts ..... 42
The Veterans Hospital Now Assured ..... 19
Weekly Health Index ..... 19
A Report of the Work of the Medical Mission Dispensary ..... 19

NEWS ITEMS ..... 53
NOTICES ..... 53
OBITUARIES ..... 52
RECENT DEATHS ..... 51
REPORTS AND NOTICES OF MEETINGS ..... 53
SOCIETY MEETINGS, CONGRESSES AND CONFERENCES ..... 56

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# GRADUATE COURSE IN CANCER

## EARLY DIAGNOSIS AND PROPHYLAXIS IN FEMALE GENITAL CANCER*

BY WILLIAM P. GRAVES, M.D.†

AMONG all the cancers of the human body, there is no more promising field for successful treatment by modern resources than that of the malignant growths peculiar to women. Every cancer of the female genital tract is, on account of its ready accessibility, curable during a certain period of its existence. And yet deaths from these very neoplasms constitute one of the highest percentages of yearly mortality in the table of cancer statistics.

There are various causes for this deplorable state of affairs, among which are the insidious nature of the disease, and the indifference of women, at the critical age, to the health of their pelvic organs. These difficulties are already being met in a remarkable way by the admirable campaign of propaganda which is rapidly instilling into the hearts of women a wholesome cancerphobia, which by impelling them to earlier consultations is destined to be the means of annually saving many hundreds of lives.

But the responsibility for a lamentable number of deaths lies at the door of the clinician, and by this term I include the general practitioner and internist, the general surgeon, the obstetrician, and all too frequently, I admit, the gynecological specialist himself. In a cancer clinic one sees with disheartening frequency patients who have reached a hopelessly advanced stage as the result of the advice of some physician who has temporized with menacing signs or who from neglect or lack of training has failed to make such local diagnostic examinations as the initial symptoms demanded.

On the other and brighter side, one sees in increasing numbers patients permanently cured of cancer, who owe their very lives to the services of their first consultant who has been prompt to detect its early presence.

In the great conflict that is being waged with cancer it is evident that the general consultant from a clinical standpoint constitutes the primary defence, and on his shoulders rests a large and increasing responsibility.

*Read at a Cancer Clinic held at the Lowell General Hospital, October 23, 1929.

†Graves—Surgeon-in-Chief, Free Hospital for Women. For record and address of author see "This Week's Issue," page 39.

It is my intention to discuss certain diagnostic and prophylactic principles in relation to gynecological cancer that I hope may be of some practical value to the general consultant. What I have to say will, I warn you, savor somewhat of an academic lecture, and is admittedly in the nature of propaganda, but it is presented with the sincere purpose of encouraging that keen coöperation between physician, pathologist, surgeon, and research-worker, which is so important in winning the ultimate success that we all confidently expect.

I shall limit my remarks to the four most frequent types of genital cancer, namely cancer of the uterine-body, that of the cervix, malignant neoplasms of the ovaries and cancer of the vulva.

### CANCER OF THE BODY OF THE UTERUS

Cancer of the uterine body has until recently been generally reputed to be of rare occurrence, an opinion that is still surprisingly prevalent. In my private practice cases of cancer of the body considerably outnumber those of cancer of the cervix, and they are increasing each year.

It has long been noted that cancer of the uterine body is especially a disease of the well-to-do, an observation that seems to be confirmed by figures from my free clinic which show a marked preponderance of cancer of the cervix. But even in this clinic, the patients of which are all poor, the proportion of cases of cancer of the body has become distinctly greater during the last few years.

The increasing frequency of body-cancer may be accounted for in part by an actual augmentation of the disease, a fact of which I am firmly convinced, though without definite proof. But there are other factors of importance that are aiding us in discovering the disease in greater numbers. First of these is our invariable insistence on a diagnostic curettage and biopsy under an anaesthetic in every case of abnormal uterine bleeding, especially after the menopause, and even in old and feeble women. In carrying out this policy we have been greatly helped by the intensive propaganda that is teaching women that abnormal discharge and not pain is the

first warning signal of uterine cancer. Of equal importance is the re-education by this same propaganda of the general profession, the older members of which after years of indifference are at last awakening to the seriousness of the situation.

Why, it may be asked, is endometrial cancer more common among the well-to-do, than among the poor? This question has not yet been satisfactorily answered. In the first place it may be that the discrepancy is more apparent than real. It is possible that the early signs are more promptly recognized and a diagnosis more

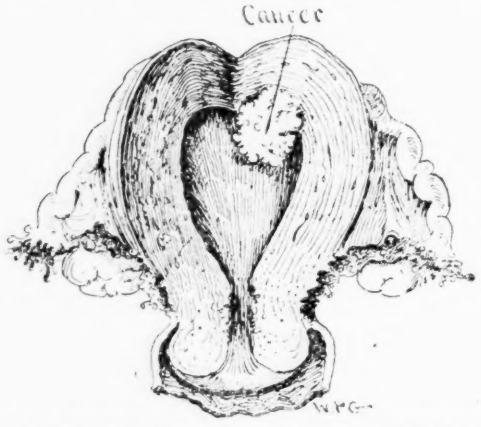


FIG. 1. Showing how cancer of the uterine body usually starts as a papillomatous excrescence near one of the horns of the uterus.

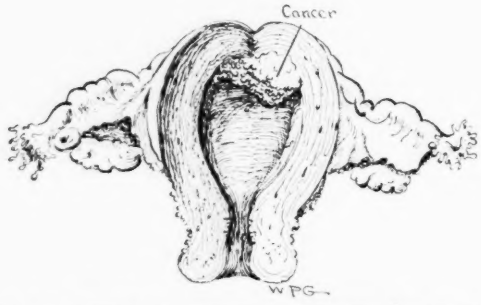


FIG. 2. Showing how cancer of the uterine body, besides invading the myometrium, spreads over the endometrium. In this illustration the cancer starting in the left horn has spread across the fundus to the right horn.

quickly established in private patients, and that their more unfortunate sisters often allow the disease to progress to that stage of general abdominal carcinomatosis, in which not even an autopsy can determine the point of origin. Surely cases of this kind are only too common in a public clinic. Other explanations are equally theoretical. It is probable that more women who are in comfortable circumstances reach the age of 55, the average age of incidence, than do women of the working classes. The nulliparous and unmarried are especially susceptible to cancer of the uterine body and they are more numerous among the rich than the poor. Finally, in the elderly maiden, those atrophic strictures and stenoses are particularly likely to occur, which, as we shall see, seem to predispose to cancer of the fundus by obstructing the genital drainage.

From a practical standpoint, systematic detection and prophylaxis in combating uterine-body cancer demand an intelligent familiarity with the pathology and clinical behaviour of the disease. I shall therefore review with your permission some of the salient points relating to this subject.

## MAIN FACTS OF PATHOLOGY AND CLINICAL BEHAVIOUR IN UTERINE-BODY CANCER

Cancer of the body of the uterus is most commonly a disease of atrophy, the average age of incidence being 55. It is somewhat more frequent in the nulliparous and the well-to-do. The disease usually starts in the upper part of the uterine canal and extends slowly, gradually spreading over the endometrial surface and at the same time invading the uterine muscular wall. It has but little tendency to pass the boundary of the internal os into the cervical domain. In most cases it tends to remain localized for a comparatively long time in the uterine body and for this reason it is peculiarly amenable to permanent curative treatment by radical operation.

The reasons for this delay in malignant activity are probably mechanical and not from any inherent benignity in the character of the growth itself. It would seem as if the original growth does not fragmentize into single cells or into cell masses sufficiently small to enter the lymph and blood channels for distribution in distant metastases, a process that is of rather rare occurrence. Metastases may however take place even in an early stage from fragmentation of the original tumor and implantation in the vagina via the cervical canal or in the ovaries via the fallopian tubes. In fact the disease is often first detected by the discovery of a vaginal implant. Cancer of the uterine body may grow for a long time without perceptibly increasing the size of the uterus. Ignorance of this fact frequently causes the examining physician to exclude cancer from his diagnosis *because there is no tumor.*

As the cancer progresses it gradually replaces the musculature of the uterus, the slowness of growth being due to the resistance of the muscle tissue. When the disease has reached the peritoneal covering it breaks through and appears as papillary excrescences on the uterine surface. From this point the cancer, released from the restraint of the uterine wall asserts its true nature and proceeds to grow with the most abandoned malignity. Seed metastases appear almost immediately and may be found in the posterior and anterior cul-de-sacs, the omentum, and on the surfaces of contiguous loops of bowel. When peritoneal metastases have occurred the disease is commonly regarded as incurable. Death usually results from obstruction of the bowels by constricting masses of the growth.

## PRACTICAL POINTS ON ETIOLOGY, DIAGNOSIS AND TREATMENT OF UTERINE-BODY CANCER

### *Etiology*

Cancer of the uterine body, unlike that of the lacerated cervix, exhibits no dominant precancerous factor toward which prophylactic measures may be directed and yet there are certain specific lesions so frequently associated with the disease that they are highly suggestive of some causative significance.

Of first importance is the fact that uterine-body cancer is preëminently though not always a disease of atrophied epithelium. The endometrium is dependent for its integrity on the influence of the ovarian hormone. When that is lost it displays an atrophic reaction with dramatic promptness. There is scientific evidence that the so-called atrophic cancers are due to a starvation of the cell which as a compensation for its lack of nutriment reverts or dedifferentiates to its original trophoblastic form and habits.

From these considerations the practical lesson may be drawn that one must be continually on the lookout for endometrial cancer in women who have undergone a permanent cessation of the menstrual function.

Nor is this a matter simply of age and the natural menopause, for the atrophied endometrium is just as susceptible to carcinomatous change after ablation of the ovaries, or sterilizing irradiation, or the precocious disappearance of the ovarian hormone from functional endocrine disturbances. This statement is made not on theoretical grounds, but can be amply proved by personal case histories.

Further evidence indicates that the starvation of the atrophied cell and its tendency to reversion may be enhanced by chemical irritation such as that of stagnant secretions. Here is another significant lesson from the research-worker that may be practically applied to our subject.

For many years we have noted the frequency with which cancer of the uterine body is associated with some form of obstruction of the genital canal. The obstruction is most frequently represented by a stenosis or atresia of the cervix, but often enough it is the result of plastic adhesions of the fornices to the portio vaginalis, or of strictures of the middle vagina, or of a stiff unyielding hymen.

Strictures of the genital canal may be due to the spontaneous changes of a senile atrophy as in the case of unmarried women. Many times however, they signalize the effect of atrophy on old scars from child-bed injuries, or the injudicious efforts of unskilled plastic surgery.

There is, we admit, no incontestable proof that impaired genital drainage is an etiological factor in the causation of uterine cancer, but the empirical evidence of it is sufficiently suggestive to cast upon the shoulders of the clinician the responsibility of care in avoiding genital strictures during plastic operations, and of taking measures to relieve them when they come to his attention. The surgical technique of restoring competent genital drainage does not come within the scope of this paper, but its importance we believe cannot be too strongly emphasized.

A discussion of the early diagnosis and prophylaxis in cancer of the uterine body would not be complete without reference to its treatment and prognosis.

On the slightest suspicion of the presence of

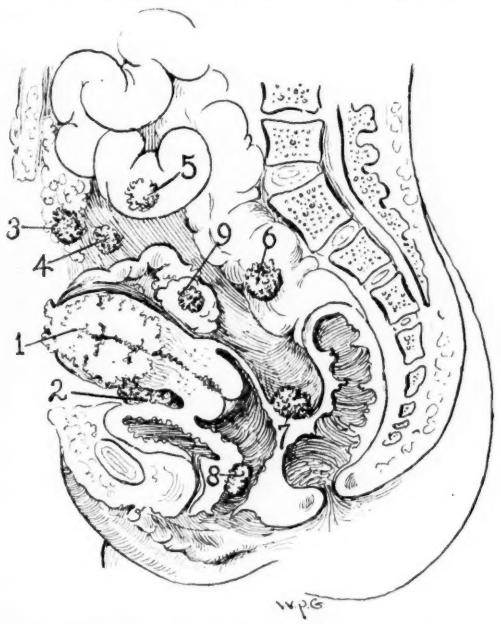


FIG. 3. Diagram showing how cancer of the body of the uterus extends and metastasizes. 1. The cancer has spread over the endometrium and has invaded the myometrium to a point on the fundus where it has broken through the wall and appeared on the peritoneal surface, whence seed metastases are disseminated. 2. Implantation in the anterior cul-de-sac, involving the wall of the bladder. 3. Contact-implantation in the tip of the omentum. When the omentum is involved metastases are readily sown throughout the peritoneal cavity. 4. Implantation on the parietal peritoneum. 5. Implantation on the small intestine. 6. Implantation on the descending colon. Intestinal involvement results in obstruction. 7. Implantation in the pouch of Douglas. 8. Implantation in the vaginal wall. This may occur at any time after the beginning of the growth in the fundus of the uterus. 9. Implantation in the ovary and tube. This may occur before the growth breaks through the uterine wall.

the disease the patient should invariably be subjected to a curettage and biopsy of the endometrium. This should always be done under an anaesthetic, for otherwise the important piece of tissue may readily be missed.

Much has been written of the dangers of a diagnostic curettage. One hears of the possibility of opening up blood and lymph-channels through which the cancer cells may be rapidly disseminated. We have already seen that cancer of the endometrium spreads by direct extension and implantation and only rarely by the blood or lymph currents, so that the danger of spreading the disease in this way must be almost negligible if the curette is delicately and judiciously handled.

Sampson has called attention to the possibility of forcing particles of cancer into the tubes

whence they may be transplanted upon the ovaries and peritoneal surfaces. This probably constitutes a real danger, one, however, which calls for care in the use of the curette but does not prohibit the only means of making an accurate diagnosis. We are sternly opposed to the practice of some surgeons who advocate hysterectomy in all cases of post-climacteric bleeding without making a microscopic examination of the endometrium.

The biopsy should be made only by an experienced pathologist since mistakes are common and easy to make. In all cases the pathologist

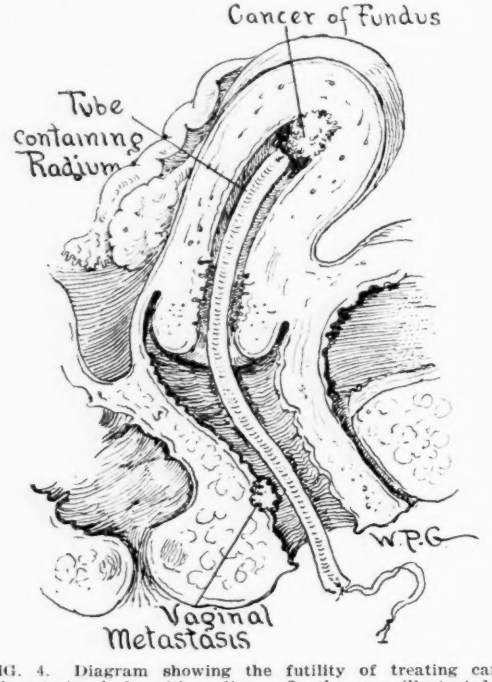


FIG. 4. Diagram showing the futility of treating cancer of the uterine body with radium. In the case illustrated the cancer is affected only by the meagre radiations from the end of the tube. The vaginal metastasis may however be effectually treated by radium as its position is favorable for the application of powerful direct radiation.

should be informed of the clinical data of the case, a provision which is too often neglected by the operator.

When a diagnosis of cancer of the endometrium has been established, the treatment should almost invariably be that of radical surgery. We have had the misfortune to prove by a short but conclusive series of cases that radium when applied to endometrial cancer is a treacherous remedy. It may stop the bleeding for months, giving a sense of false security, but the disease usually progresses insidiously and with unabated or increased energy. We have therefore discarded radium entirely and now operate on all cases of body cancer irrespective of age, obesity, or associated constitutional disease.

The ineffectiveness of radium in the treatment of uterine-body cancer is not due to any specific radio-resistance of the cell-type. It is the result, rather, of the obvious impossibility of making a proper application to the cancerous growth.

This observation is sufficiently confirmed by the marked susceptibility to radium of endometrial cancer-implants in the vagina. These metastatic nodes are not infrequent, either contemporaneous with the original disease or appearing long after the removal of the uterus. Formerly looked upon as the signal of a fatal termination of the disease, they may now be treated by radium with excellent promise of success as is shown by a number of cases in our clinic with cures of many years' standing.

### Cancer of the Cervix

Cancer of the cervix on account of its frequency and the appalling suffering that attends its later phases has been regarded as the greatest scourge to which womankind is heir. But there are numerous reasons why the mortality which at the present time is prodigious should be reduced. In the combat against this particular type of cancer the clinician possesses certain strategic advantages, which if turned to proper account would be the means of saving an incalculable number of lives.

The elements in cervical cancer that favor successful treatment are as follows:

(1) It is readily accessible in its early stages.
(2) It usually, though not always, develops slowly.
(3) It tends to distant metastasis comparatively late.
(4) The initial symptoms are sufficiently distinctive to be recognized by patient and doctor.
(5) In the early stages it may be cured by the knife, the cautery, or with radium.
(6) On account of its anatomical location it is peculiarly fitted to radium treatment since in no other cancer of the body can the important principle of cross-firing be so favorably applied.

These six vantage-points relate to the treatment of an existing disease and are sufficiently impressive to form a basis for a promising plan of attack.

The principles involved in this campaign are essentially the same as those outlined for cancer of the uterine body, the keynote of the whole situation being to discover the disease in its early localized stage.

The cure of an early cancer of the cervix is comparatively simple, but the detection of such a case is quite another matter. Here again the general consultant faces the first responsibility. There must be ordinary skill in making pelvic examinations which is easily acquired. There must be the instant resort on the slightest suspicion, to the removal of tissue and a diagnostic biopsy by a competent pathologist. Above all there must be that keen interest and knowledge of the disease which keeps the consultant continually on the lookout for its appearance.

But in addition to its other clinical advantages cancer of the cervix presents an obvious etiological factor, that of child-bed trauma,

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Laceration with its associated chronic irritating inflammation is not, to be sure, the only causative element in cancer of the cervix uteri, but it is so in at least 90% of all cases. This relationship between cervical cancer and traumatic irritation is altogether too constant and imitates far too completely the artificial production of cancer to be regarded as a *post hoc* coincidence.

Here then is a practical working-basis for a prophylaxis, which may theoretically be achieved, first by the avoidance of child-bed injuries to the cervix and secondly by timely repair of the cervical lesions which by virtue of their long-continued irritation may eventuate finally in malignant change.

Avoidance of child-bed injuries obviously depends on better obstetrics. That skillful obstetrics prevents cancer of the cervix seems well enough established by the comparative rarity of the disease among the well-to-do, and needs no special comment.

But the early prophylactic repair of the injured cervix demands further discussion.

One must first answer the question whether the repair of a damaged cervix has any actual influence in preventing later malignancy.

From a theoretic standpoint, and reasoning from the results of artificial cancer-production, one may confidently say that it is not the initial rupture of the cervix wall that determines a later cancer. It is, rather, the continued chemical irritation of the products of chronic inflammation which finally induces the malignant change in the epithelial cells. The obvious conclusion from this well-accepted opinion is that cancerous degeneration may be prevented by a prompt restoration of the cervix to anatomic integrity before irritation has had time to exert its baneful influence.

And yet this great practical lesson gleaned from the labors of the research-worker, is meeting with tardy response from the clinician. Until recently at least, the practice of primary repair of the lacerated cervix has been almost universally discountenanced. Moreover one daily sees in the gynecological clinic patients, with dangerous cervical lesions, who have been advised to defer a repair operation until the chance of further child-bearing is past, even if that period be ten or fifteen years distant.

Experimental cancer-production teaches still another important lesson that bears on this subject. The time required to produce an artificial cancer in a mouse with an inherited susceptibility is much shorter than that required for a non-cancerous animal. The same law probably holds good in all vertebrate animals including the human. Since there is no present means of determining the inheritance index in woman, promptness in preventing the irritating stimulus to cancer is plainly essential in order to save the susceptible case.

That women possess an inherited susceptibility to cancer is supported, theoretically at least, by the rapidity with which cancer of the cervix sometimes appears after the initial trauma, and further by its occasional development in nulliparous women as the result of an ordinary cervicitis.

The theory that repair of a lacerated cervix

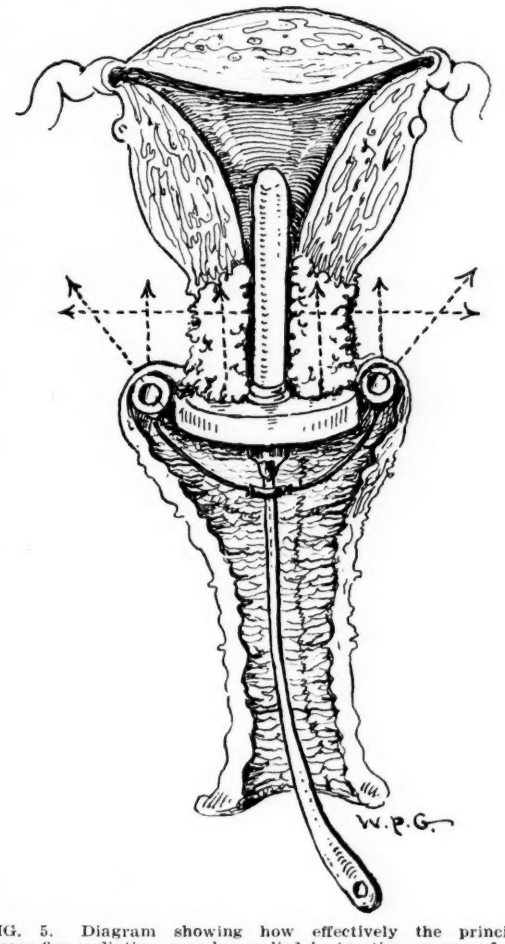


FIG. 5. Diagram showing how effectively the principle of cross-fire radiation may be applied in treating cancer of the cervix. The drawing illustrates the Smith detachable applicator. Tubes of radium salts are placed (1) in the tube inserted in the uterine canal, (2) in the circular cup fitted against the vaginal portion of the cervical cancer, and (3) in the tubes (shown in cross-section) pressed into the lateral fornices. The lateral radiations from the radium tubes cross each other in the substance of the cancer and in the two parametria.

prevents a later cancer, a notion that has been prevalent for more than fifty years, is open to the criticism that it has never been scientifically or empirically proved.

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whence they may be transplanted upon the ovaries and peritoneal surfaces. This probably constitutes a real danger, one, however, which calls for care in the use of the curette but does not prohibit the only means of making an accurate diagnosis. We are sternly opposed to the practice of some surgeons who advocate hysterectomy in all cases of post-climacteric bleeding without making a microscopic examination of the endometrium.

The biopsy should be made only by an experienced pathologist since mistakes are common and easy to make. In all cases the pathologist

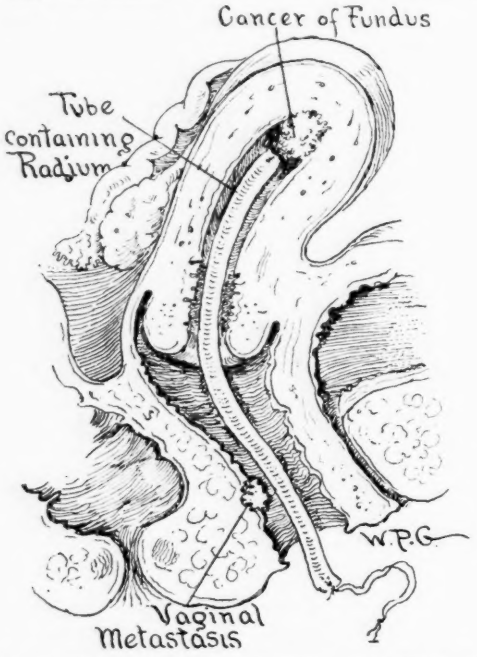


FIG. 4. Diagram showing the futility of treating cancer of the uterine body with radium. In the case illustrated the cancer is affected only by the meagre radiations from the end of the tube. The vaginal metastasis may however be effectually treated by radium as its position is favorable for the application of powerful direct radiation.

should be informed of the clinical data of the case, a provision which is too often neglected by the operator.

When a diagnosis of cancer of the endometrium has been established, the treatment should almost invariably be that of radical surgery. We have had the misfortune to prove by a short but conclusive series of cases that radium when applied to endometrial cancer is a treacherous remedy. It may stop the bleeding for months, giving a sense of false security, but the disease usually progresses insidiously and with unabated or increased energy. We have therefore discarded radium entirely and now operate on all cases of body cancer irrespective of age, obesity, or associated constitutional disease.

The ineffectiveness of radium in the treatment of uterine-body cancer is not due to any specific radio-resistance of the cell-type. It is the result, rather, of the obvious impossibility of making a proper application to the cancerous growth.

This observation is sufficiently confirmed by the marked susceptibility to radium of endometrial cancer-implants in the vagina. These metastatic nodes are not infrequent, either contemporaneous with the original disease or appearing long after the removal of the uterus. Formerly looked upon as the signal of a fatal termination of the disease, they may now be treated by radium with excellent promise of success as is shown by a number of cases in our clinic with cures of many years' standing.

### Cancer of the Cervix

Cancer of the cervix on account of its frequency and the appalling suffering that attends its later phases has been regarded as the greatest scourge to which womankind is heir. But there are numerous reasons why the mortality which at the present time is prodigious should be reduced. In the combat against this particular type of cancer the clinician possesses certain strategic advantages, which if turned to proper account would be the means of saving an incalculable number of lives.

The elements in cervical cancer that favor successful treatment are as follows:

(1) It is readily accessible in its early stages.
(2) It usually, though not always, develops slowly.
(3) It tends to distant metastasis comparatively late.
(4) The initial symptoms are sufficiently distinctive to be recognized by patient and doctor.
(5) In the early stages it may be cured by the knife, the cautery, or with radium.
(6) On account of its anatomical location it is peculiarly fitted to radium treatment since in no other cancer of the body can the important principle of cross-firing be so favorably applied.

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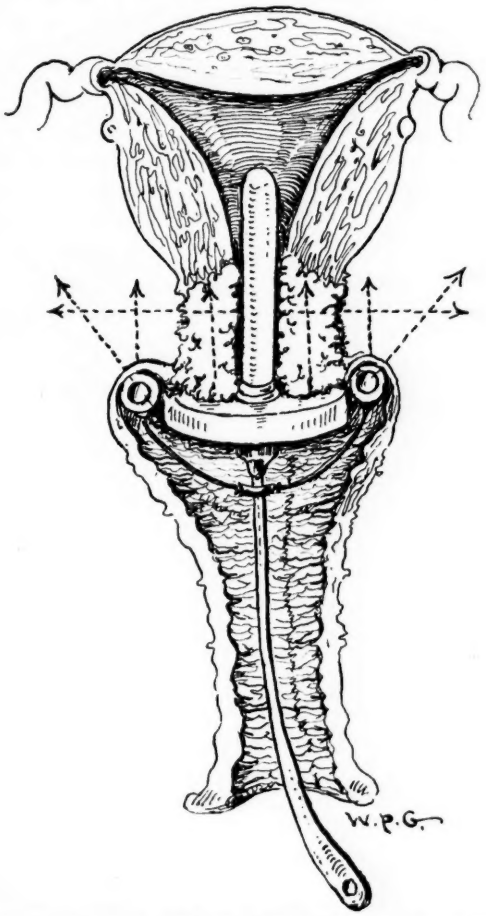


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were lacking, nevertheless, some important facts were discovered. In two of the cases a re-examination of the specimens of cervical tissue revealed that cancer had existed at the time of the repair operation and had been overlooked by the pathologist. In one case in which there was no pathologic record the symptoms of cancer ensued so soon after the repair operation as to make it probable that the disease existed at that time. If, then, we exclude these 3 cases of already existing cancer, there are left only 9 or 1.6 per cent. which developed cancer after cervical repair, and, in most of these, early pathologic records were lacking.

Approaching the subject from another angle, we studied the hospital histories of 4815 cervical repairs, including the operations of trachelorrhaphy, amputation, and cauterization, and were able to find 7 cases that later developed cancer. In 3 cases (including the 2 mentioned above) the pathologist had overlooked a cancer in the tissue removed by a trachelorrhaphy. In 2 cases it could be shown that the plastic operation, injudiciously performed, had resulted in extreme obstructing stenoses of the upper vagina and cervix, conditions which we have seen play an important part in the production of genital cancer.

We have, then, out of nearly 5000 cases of cervical repair, the records of only 4 that developed a cancer later, and in 2 of these the disease was conceivably encouraged by an unskillful operation, or at least might have been prevented by a skillful one.

These figures do not, of course represent the actual incidence of cancer following our repair operations, since in so large a series covering so many years cases must have occurred of which we have no knowledge. But it may be said that our hospital has always had exceptional advantages in keeping track of its postoperative patients. After making allowance for unknown cases we feel certain that the percentage of later cancer occurrence would still be small. It cannot be claimed that our figures constitute an absolutely scientific proof of the prevention of cervical cancer by repair, since it is impossible to gather a series of control cases for comparison. Nevertheless, they are of value in supporting the belief generally held, and now rationalized by science, that timely reparative operations insure an effective, though not a perfect, prophylaxis against cancer.

We may summarize our conclusions by saying that the irritation of a lacerated cervix is a competent stimulating cause of cervical cancer, and that timely repair probably prevents it.

### Cancer of the Ovaries

Preventive treatment in the field of ovarian cancer is based upon an unproved hypothesis, that the great majority of malignant ovarian neoplasms were at one period of their existence histologically benign. Although to the surgeon who is continually handling these tumors the evidence in favor of the theory seems overwhelming, yet many authorities in pathology maintain that most ovarian cancers are malignant from the start.

Dr. Karsner, Professor of Pathology in the Western Reserve University of Cleveland, takes a sensible view of the situation when he says in his text-book that, although malignant degeneration of benign ovarian tumors has not been proved, it is nevertheless the safest plan from a practical standpoint to assume that such changes may take place.

A full discussion of this important subject would require too much time for the limits of this paper. Suffice it to say that the pathology and clinical behaviour of ovarian tumors should be a matter of familiar knowledge to every practising physician.

We may summarize the lessons of our own experience as follows:

A certain small number of ovarian neoplasms are malignant from the start, such as the formidable sarcomata seen in young girls, and certain rare tumors of embryonic or teratomatous origin.

All epithelial new-growths of the ovary have a malignant potentiality and most of them are, for a varying period of their existence benign. The tendency to malignant degeneration differs with the epithelial cell-type that characterizes the tumor. Thus the papillary cystadenoma is much more apt to turn malignant than the pseudomucinous variety. The endometrioma or chocolate cyst with its lining of uterine mucosa is peculiarly dangerous in this respect. Tumors like the dermoids and certain monolocular cystomata are comparatively immune to cancerous change since the epithelial lining is partially or completely wanting or has been desquamated off during the early stages of growth.

We believe that the law of irritation operates in ovarian cancers as it does in other cancers like that of the tongue, the cervix and the stomach. In the case of ovarian growths it seems probable that the irritating stimulus is derived from the chemical alteration and the long continued centrifugal pressure of the cyst contents.

As we have already intimated the irritating stimulus must, excepting in individuals of peculiar hereditary susceptibility, be exerted for a considerable period of time before malignant change takes place in the growth of the cell.

This precancerous period in ovarian growths constitutes the keynote of the prophylactic situation, for the immediate removal of the tumor precludes of course a later cancer. On the other hand the removal of an ovarian tumor that has once become malignant is in the majority of cases followed sooner or later by a general hopeless peritoneal carcinomatosis.

The majority of ovarian cancers appear after the menopause and have been deliberately neg-

lected until the distress from the accumulating ascites has driven the patient to seek surgical relief. Usually the patient herself is responsible for the wilful neglect of her condition, but often enough she has had her mind set at rest by the advice of some one who has told her that she is carrying an innocent tumor.

There is of course no such thing as an innocent ovarian neoplasm. Such tumors never cease growing, and even if they do not develop into cancers, they always have lethal possibilities from torsion, necrosis, inflammation, or from their very size.

But ovarian tumors in their earlier stages may exist for a long time without giving the slightest symptomatic warning. How then are they to be systematically detected?

The only answer is that every woman as she approaches and passes the menopause should be educated to subject herself to periodic pelvic examinations no matter how well she may feel. Nor should it be necessary for her to consult a specialist. Every practising physician, every internist, should train himself to be as expert in making pelvic examinations as he is in testing the lungs and heart.

The attitude of false modesty or timidity toward the office pelvic examination on the part both of the general practitioner and the patient is a medico-social error that has cost many a woman her life.

### Cancer of the Vulva

Cancer of the vulva, occurring as it usually does in old age, is less common than the other cancers that we have been discussing, but is nevertheless much more frequent than is usually supposed.

Hideous in its clinical aspects and fatal in its outcome, this disease has always been regarded as one of the most hopeless types of cancer.

And yet there is no cancer of the body which presents a more obvious precancerous stage, the timely treatment of which may be counted upon to prevent the later appearance of malignant disease.

By far the great majority of cancers of the vulva develop from a leukoplakic base.

The dangerous affection commonly designated as leukoplakia or kraurosis of the vulva is strangely unfamiliar to the average practitioner. This disease usually accompanied by agonizing pruritus produces in the mind of the patient a curious sense of shame that often prevents her from consulting a physician, or even of acknowledging the symptom of pruritus, so that many women suffer in silence for years until the affected area produces a fatal cancer.

Cancer of the vulva will never be conquered by a policy of waiting until the disease is fully established since it metastasizes early and fatally, and is seldom permanently cured even by the most radical treatment.

But many cases may be prevented from becoming malignant by the prompt treatment of leukoplakia or kraurosis whenever it appears. The treatment consists of a simple dissection of the leukoplakic areas, or of the entire vulva if the affection is extensive.

Irradiation, whether in the form of radium, X-rays or light-rays, is in our opinion utterly contraindicated, although for some unaccountable reason this form of therapy seems to be almost universally advocated.

In our experience we have never seen it benefit a single case, and in several instances it has either done actual harm, or has served seriously to handicap the more rational treatment by surgery.

In closing I may say that there is among the ranks of clinicians who are daily treating cancer, a growing spirit of optimism that has been stimulated by the splendid efforts of the laboratory worker.

The complete conquest of cancer is to be sure not yet in sight, although it is confidently expected. The final victory will be won, not in the clinic but in the laboratory.

In the meantime it is the inescapable duty of every physician, no matter what his specialty, to put into unremitting practical use the new knowledge of the disease which the research-worker is daily accumulating.

## CLINIC OF THE FREE HOSPITAL FOR WOMEN*

**Cancer Female Genital Tract, W. P. Graves, M.D.**
**Cancer of the Breast, F. A. Pemberton, M.D.**
**Lead Treatment for Cancer, George V. Smith, M.D.**

DR. GRAVES introduced the subject of uterine cancer by a brief blackboard talk on the differential pathology, etiology and clinical course of the two chief types of uterine cancer, i.e. that of the cervix, and that of the body. For lack of time his remarks were directed chiefly to cancer of the cervix. The etiological factors of laceration, long continued irritation and erosion were stressed, and it was shown how the repeated attempts of the squamous epithelium to epidermize the eroded areas finally result in malignant proliferation of the epithelium. The clinical course of the disease was reviewed. The discussion of treatment was confined to a detailed description of the technical methods used

*Read at the Free Hospital for Women during the week of the Graduate Course in Cancer, 1929.

at the Free Hospital for the application of radium.

This technique was demonstrated by applying radium to two cases of cervical cancer, a diagnostic biopsy being made at the time by frozen sections.

The numerous dissimilarities of cancer of the uterine body to that of the cervix were detailed, and the superiority of radical surgery to radiation in this type of cancer was emphasized.

In order to show the possibilities of radium in the treatment of cancer of the cervix, several cases of long standing were presented and examined by the guests. The cases briefly summarized were:

1. Mrs. M. Treated with radium in 1922. Well until recently. Now, slight show of blood. Examination shows probable local recurrence in cervix. (7 years after first treatment.)
2. Mrs. C. Radium in January 1920. Now perfectly well. No sign of recurrence. (9 years, 4 mos.)
3. Mrs. M. K. Radium in May 1920. Now perfectly well. No sign of recurrence. (9 years.)
4. Mrs. R. K. Radium in May 1925. Now perfectly well. No sign of recurrence. (4 years.)
5. Mrs. B. Radium in May 1925. Now perfectly well. No sign of recurrence. (4 years.)

Several other illustrative case-reports were read of patients recently examined and found to be without recurrence: Mrs. D. 6 years and 2 mos.; Mrs. I. 10 yrs. and 2 mos.; Mrs. L. 8 yrs. and 10 mos.; Mrs. L. 6 yrs., after radium treatment of cancer of the cervix.

In order to illustrate remarkable early effects of the radium on cervical cancer, 9 cases were shown and examined by guests. In these the radium treatment had been applied within a year. Since in all of these cases the disease was comparatively early, a permanent cure might be expected in 50-60 per cent. This number of early cases, which represented only a part of those seen during the past year, are an encouraging vindication of the propaganda now being carried on to bring patients to treatment before the disease is too advanced for hope of cure.

Two cases of primary cancer of the vagina were presented. Radium had been used in both cases. The disease had been retarded but not cured, and required further treatment.

Dr. Graves then spoke of the significance of leukoplakia and kraurosis of the vulva as precursors of cancer, and emphasized the importance of surgical removal in all cases of permanent leukoplakic changes in the epidermis of the vulva. Two cases of leukoplakia vulvae were demonstrated. Six cases of leukoplakia and kraurosis that had been operated upon were shown. In one, the disease had recurred and required a second operation.

Dr. Frank A. Pemberton briefly reviewed 234 cases of carcinoma of the breast treated at this clinic. Fifty-three per cent. of all operated, traceable cases were alive at the end of three years; and 36.9 per cent. were alive at the end of five years; and 25.7 per cent. survived a seven year interval. He outlined the usual treatment and demonstrated four cases that were apparently cured. He performed a radical breast amputation.

Dr. George V. Smith briefly outlined the lead treatment of cancer according to the Blair Bell method and made a short demonstration of the preparation of the lead solution. He emphasized that both the preparation and use of lead were still in the experimental stage and should not be adopted for general use. Of 31 patients who received 200 or more milligrams of lead (surgery, radium and x-rays had been employed as well whenever advisable), 16 died from two months to one year and four months after the start of treatment, 7 were living with a recurrence three months to one year and eight months later and 8 were apparently well five months to one year and seven months later. Although no final statement can be made, lead has served to be of value in 6 of the above 8 cases.

## CANCER OF THE FEMALE GENITAL TRACT*

LOUIS E. PHANEUF, M.D.†

I HAVE thought that in the few moments at my disposal I would try to interest you in the precancerous lesions of the cervix and to say a few words about treatment.

Cancer of the uterus is divided into cancer of the cervix and cancer of the body. Clinically, in the cervix we have three different types of cancer, the so-called everting type or cauliflower, the inverting type of ulcerative which are squamous cell cancers—the inverting type eating its way into the cervix and forming an ulcerated surface which bleeds; the everting type causing an exuberance of cancer cells on the surface forming a mass which bleeds. These are more amenable to treatment than the type found in the endocervix which metastasizes to the bases of the broad ligaments very rapidly. This is the cylindrical cell type of cancer and is not so amenable to treatment.

We all agree that in cancer chronic irritation is a factor. We have in the cervix a hidden lesion which the patient doesn't see. So the diagnosis is delayed. A doctor who has a woman patient who complains of bleeding often sends the woman home with a bottle of ergot; but every woman who has bleeding should have

*Read at the Carney Hospital during the week of the Graduate Course in Cancer, 1929.

†Phaneuf—Professor of Gynecology, Tufts College Medical School. For record and address of author see "This Week's Issue," page 39.

a vaginal examination. If we had a patient with bleeding from the face, that patient would insist upon seeing a doctor and getting medical attention, but in a lesion of the cervix we get the patient in the late stage.

Now the treatment of cancer until we know the cause is the avoidance of cancer. We know there are three lesions in the cervix which lead to cancer; first, the trauma of childbirth which leads to lacerations. We do know that a torn cervix with ectropion with the mucous membrane of the cervix in the vaginal secretions is under irritation. Our advice is that these lacerations should be repaired when irritated. We are frequently blocked in this by the family physician who says that if a subsequent labor occurs, this tear will repeat itself. Yet I have had two patients under 30 who died of advanced cancer while waiting to have another child.

Second, erosion. This is the condition that the old time gynecologists called ulceration. We know that it isn't an ulceration but it is a proliferation of the epithelium upon the portio vaginalis. It is a precancerous condition. It is healed by simply doing linear cauterization. We cauterize the endocervix and make radial lines with a fine tipped cautery; and in three weeks a healthy cervix ensues.

And the third condition which leads to cancer is chronic endocerviciitis, and this usually follows infection. The lesion isn't recognized during the acute stage because the lesions of the tubes are of more significance. As the lesions clear up there is a chronic discharge which may be healed by cauterization, but in advanced stages it may be necessary to cone out the cervix which removes all the infected mucosa and then turn healthy mucosa into the cervix.

Cancer of the fundus is a lesion which is very much more satisfactory to treat. Here metastases are slow because of the poor supply of lymphatics. The condition starts as a localized growth in the fundus and then it spreads either through the myometrium into the peritoneum or into the endocervix when it spreads to the lymphatics. This lesion when recognized early is very curable—70 per cent. of cures as compared to 15 per cent. in the cervix.

Treatment of cancer of the cervix has changed entirely in the last ten years. Ten years ago we were trying the Wertheim operation and then we tried radium; it was later discovered that radium and X-rays gave us more cures and we didn't have the higher mortality of operation, so that most gynecologists have given up the radical operation in the cervix for radium and X-ray which may be given in massive doses.

In cancer in the fundus usually operation is advisable if the disease hasn't broken through into the peritoneum; otherwise radium and X-rays are indicated. Rarely do we see sarcoma in the cervix or uterus.

If we can get cancer of the cervix early, there is great hope for cure by radium and X-rays. In neglected cases radium and X-rays may not cure but they will stop the discharge and give comfort. It is rare to find a case now of sloughing cancer with the terrible odor therefrom.

## CARCINOMA OF THE FEMALE GENITAL TRACT*

JOE V. MEIGS, M.D.†

THE treatment of cancer of the cervix in the Pondville Hospital is entirely radiological. All cases that can be are treated with radium, and those that are hopeless are treated with x-ray.

The cancers of the cervix are divided into four groups:

1. Involvement of the cervix.
2. Involvement of the cervix and a small portion of the vagina.
3. Involvement of the cervix, parts of the vagina, and invasion of the broad ligaments.
4. Cases with wide fixation and distant metastases.

They are further divided into two groups: 1 and 2, operable cases, comprising 20% of the total; 3 and 4, inoperable, comprising 80% of the total number.

Groups 1 and 2 are treated with beta radiation or destructive cauterization. Groups 3 and 4 are treated with gamma radiation to avoid the sloughing caused by beta radiation. About 11% of all cases are apparently well at the end of five years. Of the favorable groups 1 and 2, about 40% are alive and well at the end of five years.

Too many cases of carcinoma in the cervical stump, following supravaginal hysterectomy, come to the hospital. Judging from the number of cases that report with advanced cancer of the cervix after supravaginal hysterectomy, many of these tumors must have been present at the time of operation.

In order to avoid this serious complication it is suggested that any patient at the age of 35 or over who has any vaginal bleeding that is abnormal, any beginning abnormal discharge, or any change in the amount of discharge, or a lacerated cervix, should have a careful investigation of the vagina, cervix and uterus. Specimens should be sent to the pathological lab-

*Read at the Pondville Hospital during the week of the Graduate Course in Cancer, 1929.

†Meigs—Surgeon to Out-patient Department, Massachusetts General Hospital and Palmer Memorial Hospital. For record and address of author see "This Week's Issue," page 39.

oratory, and treatment instituted in accordance with the microscopic findings. If a frozen section can be competently done the treatment can be carried out at once; if not it is better to postpone the operation and operate a second time, after the report is in. Radium treatment of cancer of the cervical stump is not eminently satisfactory. In all suspicious cases specimens should be removed and sent to the laboratory, and the treatment thereafter determined. If the patient has a cancer of the cervix, radium should be used, if not, a repair of cervix and supravaginal hysterectomy should be performed. Statistics recently published show that out of about 7000 cervical repairs, only twelve patients subsequently developed cancer. Supravaginal hysterectomy without proper investigation of cervix, vagina, and uterus, is dangerous.

Adenocarcinoma of the fundus of the uterus is most usual in women after the menopause. Occasionally it is found in younger women. Diagnostic curettage is most important and the diagnosis must be made microscopically It is easy to confuse polypoid hypertrophy of the endometrium grossly with adenocarcinoma of the uterus. Either a frozen section diagnosis should be made or operation delayed a few days. Total hysterectomy must be performed for this disease; supravaginal hysterectomy will not suffice. Total hysterectomy is a very serious operation even in the hands of the most experienced operator. It is therefore much wiser to obtain accurate diagnosis, and if no cancer is present the cervix can be repaired and a supravaginal hysterectomy done without subjecting the patient to the more serious operation of total hysterectomy. Supravaginal hysterectomy, with or without coning out of the cervix, should not be done for carcinoma of the fundus. 12% of the cases of adenocarcinoma of the fundus of the uterus have metastatic nodules in the vagina. For this reason careful investigation of the vagina is very essential, for when vaginal metastases are present the disease cannot be cured even by total hysterectomy. Here a combination of radium and surgery should be employed, or radium alone. In a considerable number of cases the tumor either metastasizes or directly extends into the ovary; therefore at operation both ovaries must of necessity be removed. When the patient is a poor operative risk, or when metastasis or inoperable extension has already taken place, radium treatment of the disease can properly be undertaken.

Patients with cancer of the ovary, unless very definite fixation of the tumor mass can be accurately demonstrated, should be operated upon, and all tumor tissue removed whenever possible. Just because a patient has ascites and peritoneal implantations, the disease should not be considered fatal. At the Massachusetts General Hospital 27% of the cases of this type, following the removal of as much tumor tissue as possible and the judicious use of deep x-ray therapy, are alive and apparently well for from 3-10 years after operative treatment. All cases of carcinoma of the ovary are therefore operated upon as far as possible, and are given deep x-ray therapy.

Cancer of the vagina is a very malignant lesion, very rare and usually fatal. We have one case at the Pondville Hospital which has done well following radium treatment. In the differential diagnosis, metastasis from carcinoma of the fundus should be considered.

The end results of carcinoma of the vulva cannot be given. The treatment is total vulvectomy with dissection of both groins if the glands are small. If the glands are large we prefer x-ray treatment over the groins, as it is more than probable that there is already extension into the iliac and perirectal glands. If this is true, dissection of the groins is of no avail. Radium and x-ray are used only in recurrent cases following incomplete vulvectomy. The radical operation is done when possible.

Leiomyosarcoma or malignant fibroid is a rare tumor. The diagnosis is usually made following the removal of a uterus for fibroids, or following myomectomy. Supravaginal hysterectomy has usually been performed. This is of course not the proper treatment, but the diagnosis of the disease before operation is extremely difficult. Total hysterectomy should be performed. Three cases seen recently at the Massachusetts General Hospital are now dead, from rapid extension of the disease following supravaginal hysterectomy, in spite of heavy deep x-ray therapy. Very rapidly growing fibroids, soft fibroids and those with firmly adherent capsules should be removed by total hysterectomy.

# THE NEW HAMPSHIRE MEDICAL SOCIETY

## TUMORS OF BONE*

### Clinical Course. Differential Diagnosis

BY DEAN LEWIS, M.D.†

THE results of the treatment of bone tumors are unsatisfactory. If any improvement is to be made, the nature of the bone lesion must be recognized early. Metastases frequently occur, however, even when the diagnosis is made early. Considerable advance has been made in differentiating different types of bone lesions and in applying different procedures in the treatment of different types of tumors.

#### FIBROMA OSTEITIS AND CENTRAL GIANT CELL TUMOR

The recognition of osteitis fibrosa cystica has prevented mutilating operations, which undoubtedly were performed at one time for this lesion, which is benign and will heal if a fracture occurs or the bony wall of the cyst, which results from the liquefaction of the fibrous tissue, is crushed.

A number of different lesions have probably been included under bone cysts, but osteitis fibrosa described by Von Recklinghausen is a clinical entity.

Von Mikulicz was probably the first to note the occurrence of this lesion in the young when the bones are exposed, probably, most frequently to stresses and strains. Bloodgood, in 1910, called attention to the fact that fibrous osteitis occurred most frequently in patients under 18 years of age, and his observation has been confirmed by a number of others. Geschickter and Copeland recently found in studying 175 cases of bone cysts that the average age of occurrence was between 10 and 15 years. In about 20 per cent. of the cases, however, the patients were over 21.

Clinically, this lesion is usually associated with some pain; not infrequently referred to by the patient as rheumatic in character. Some expansion of the bone, variable in degree, is also noted. The solitary bone cyst develops most frequently in the upper extremity of the femur, humerus and tibia. Silver's review of 97 cases showed that the femur was involved in 31 cases, the humerus in 25 and the tibia in 15.

The diagnosis can usually be made by the x-ray, for the changes produced by fibrous osteitis are quite characteristic. In the first place the lesion is most frequently found on the shaft side of the epiphyseal cartilage—the metaphysis. The bone is expanded symmetrically and the swelling is fusiform, extending down on the shaft. The shadow is lobulated, as the fibrous tissue is divided off by trabeculae of bone. The shadow may occur in the shaft. Some reasons have recently been given for the appearance of the shadow in the shaft, which will be discussed later.

Another striking thing clinically about fibrous osteitis which differentiates it from central giant cell tumor is that when a fracture occurs healing is apt to take place in fibrous osteitis, leading to a cure; while, when a fracture occurs in a central giant cell tumor, nonunion occurs and the tissues grow beyond the site of fracture beneath the soft tissues, not necessarily invading them. I have had under observation a giant cell tumor of the lower end of the radius in which a pathological fracture occurred. Subsequently the lower end of the radius was resected and bone transplanted to restore the length of the bone. Some of the tumor was left beneath the pronator quadratus. This commenced to grow, the x-ray was applied, and subsequently an encapsulated mass the size of a small tangerine was removed, and there has been no recurrence. This growth showed no tendency to invade the muscle adjacent to it.

The differentiation of these two lesions from sarcoma in general has been a great advance. Both are benign. Fibrous osteitis repairs after fracture or crushing of the bony wall of the cyst, while giant cell tumors repair after curettage.

The cause of osteitis fibrosa and giant cell tumor has never been determined. Some pathologists are inclined to regard giant cell tumor as the expression of excessive repair following injury, comparable to keloids following injury of the skin and subcutaneous tissues. Geschickter and Copeland have come to the conclusion that fibrous osteitis is characterized by proliferation of fibrous tissue and the formation of new bone. It is essentially a process of repair and healing. Fibrous osteitis is not an inflammation in fibrous tissue or in bone, but a process of repair—a natural defense reaction of cancellous bone, cortical bone and periosteum against pathological invasion, whether the lesion be an abscess, sarcoma or giant cell tumor.

Geschickter and Copeland would not suggest that all cases of bone cysts are healed giant cell tumors, nor that all giant cell tumors will pass to a healed state represented by fibrous osteitis. Some primary disease, such as osteomalacia, Paget's disease, fragilitas ossium or osteo-arthritis may be responsible for the formation of some cysts. The majority of solitary bone cysts, about 78 per cent., show their relationship to giant cell tumors (1) by persistence of giant cell areas most frequently found in recent cysts with short duration of symptoms, and (2) by the fact that the lesions are on the metaphyseal side of

*Read at the Annual Meeting of the New Hampshire Medical Society, May 28, 1929.

†Lewis—Professor of Surgery, Johns Hopkins Medical School. For record and address of author see "This Week's Issue," page 39.

the epiphyseal line, bordering on the diaphysis in which giant cell tumors occur. Normal bone seems to attempt to stem the invasion of the giant cell tumor. The histologic structure of the tissue about a giant cell tumor is quite similar to that in the wall of a bone cyst. The difference in structure between bone cyst and giant cell tumor is in degree, not in kind. In one lesion there is more giant cell tumor tissue and less proliferation of fibrous tissue; while in the other (bone cyst) proliferation of fibrous tissue predominates and later new bone formation, with the giant cell tumor tissue not being a prominent part in the histological picture.

Giant cell tumors have a shorter history than bone cysts. The average duration is six months.

Some reference should be made to giant cell tumors of the vertebrae. In 1924 I reported a giant cell tumor of the fourth dorsal vertebrae. This patient had a paraplegia. When operated upon, a tumor containing spicules of bone was

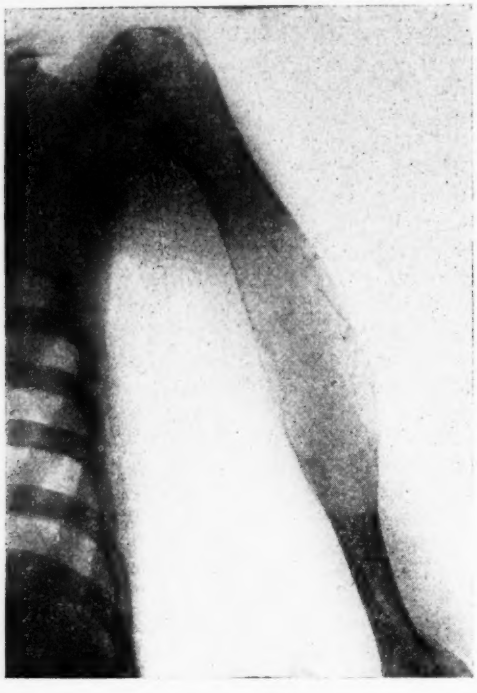

FIG. 1. *Fibrous Osteitis:* The lesion situated in this case near the middle of the shaft of the humerus occurs most frequently in the metaphysis. The lesion is characterized by a fusiform enlargement of the bone and symmetrical expansion of the cortex. Fracture through the lesion is frequently followed by repair, with union at the site of fracture and cure of the disease.

found. This surrounded the spinal cord. Seventeen cases of this type of tumor, including my own, were reviewed at this time. Recovery after partial removal or exploration occurred in thirteen of these, ossification being noted quite frequently. In two cases the tumor was located in the transverse processes of the lumbar vertebrae and in the lamina of the dorsal vertebrae in two. In the majority of the remaining cases the tumor was found in the lateral portions of the body of the vertebra in close relation to the pedicles.

Geschickter and Copeland have pointed out that these tumors occur in compact bone and that the early defensive reaction of fibro-ostosis may account for their tendency to heal. It is interesting that in one case of tumor of the vertebra in which a second operation was required the diagnosis of central giant cell tumor was made when the tissue was first removed. At the second operation a diagnosis of bone cyst was made. These form an interesting group of tumors, characterized by their benignancy. A di-

FIG. 2. *Central Giant Cell Tumor of the Lower End of the Femur:* These tumors occur most frequently in the lower end of the radius, the upper end of the humerus, the upper end of the tibia and the lower end of the femur. The growth is globular instead of fusiform as in osteitis fibrosa. The expansion of bone is asymmetrical and fracture through lesion, frequently associated with but little pain, is followed by nonunion. Tumor tissue escapes after fracture underneath the soft tissues or into neighboring joints. Note the difference in the shadows.

agnosis of these lesions can readily be made by an x-ray examination. Definite, conservative, surgical procedures can be employed when the diagnosis is made.

### PERIOSTEAL SARCOMA

Periosteal sarcomas may arise from either the fibrous layer or from the osteogenic layer (cambium) of the periosteum. The tumor arising from the fibrous layer does not differ from fascial sarcomas arising from fascia in other parts of the body. These tumors destroy bone and are usually characterized by erosion of bone at the point where they develop.

The tumor arising from the cambium layer on the other hand produces bone, and at the same time destroys cortical bone. The new bone that

is formed is apt to develop at right angles to the shaft-stalactite growths forming. A number of different explanations has been given for this peculiar formation of bone. Ossification of Sharpey's fibers has been suggested as a cause, but it is probable that ossification occurs along vessels, projecting out as papillary growths from the surface of bone. These stalactite growths may also occur in inflammatory lesions. This type of tumor invades the marrow cavity also. When the bone is sectioned longitudinally the extension in the marrow may be some distance beyond the site of the primary tumor.

In the x-ray bone destruction associated with bone formation is quite typical, although at times some difficulty may be encountered in making a differential diagnosis between myositis ossificans and these bone producing tumors arising from the periosteum. Myositis ossificans is observed most frequently in the brachialis anticus following posterior dislocations of the elbow joint. The shadow in this case is quite typical and the differential diagnosis is not difficult.

In a case reported by Chambers the differential diagnosis was difficult. The ossifying process occurred about the upper end of the humerus and in the deltoid muscle. The diagnosis of myositis ossificans was made when the tissue was examined microscopically, but subsequently this patient died of bone producing metastases in the pleura.

Myositis is not uncommon in the vastus externus during the football season. In these cases the process does not extend beneath the periosteum to some distance beyond the new bone formation as it does in osteoblastic sarcoma. The bone in myositis ossificans is laid down parallel to the shaft instead of at right angles, and the shadow is apt to have a dotted veil appearance. It should be remembered in this connection also that myositis tends to regress after a certain stage, while the osteoblastic sarcoma is a progressive lesion showing no tendency to regression.

Some difficulty is also encountered in making a differential diagnosis between osteoblastic tumors and sclerosing osteomyelitis. The x-ray usually indicates the diffuse characteristics of a sclerosing osteomyelitis as a considerable distance of the shaft of the bone is usually involved. Fever occurs in rapidly growing sarcoma. The fever may be as high as 103°F, or even more. At times considerable difficulty is experienced in making the differential diagnosis, but the x-ray examination will give a great deal of information which may be used in differentiating the two

### EWING'S TUMOR

Ewing has described a nonosteoblastic type of tumor of bone which he believes develops from endothelium and to which he gives the name of endothelioma. These are to be differentiated from the angiosarcomas and hemangioma of bone in which blood vessel structure is reproduced. In the endothelioma described by Ewing the endothelial cell is the unit of growth, the blood vessels not being reproduced histologically.

This tumor occurs in early life. Ninety-five of the cases studied by Geschickter and Copeland occurred between the ages of 4½ and 25 years. They do not differ, however, in this respect from other tumors of bone. Cases have been reported in a child as young as 4½ years and in a patient as old as 60. Among 400 sarcomas of bone in the Surgical Pathological Laboratory of the

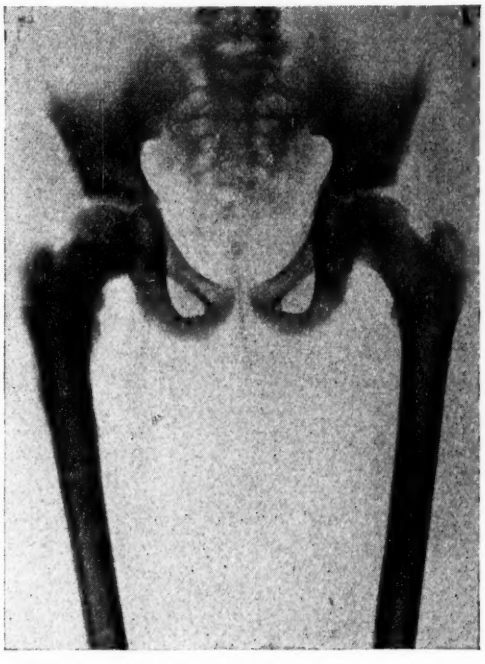

FIG. 3. *Sclerosing Sarcoma of the Upper End of the Right Femur:* The bone is dense. Sarcoma of bone may produce an osteosclerosis as well as an osteoporosis. Sometimes it is difficult to differentiate between chronic sclerosing osteomyelitis and bone tumors. The value of biopsy is demonstrated in such cases.

Johns Hopkins Hospital 15 per cent. were found to be of the type described by Ewing.

Geschickter and Copeland have recently reported this group of cases, in one of a series of studies on bone tumors. In 56 of the cases (90 per cent.) a mass could be palpated. In 19 per cent. the swelling was apparently the initial symptom. One of these tumors had a duration of seven years, regressions occurring and the tumor subsequently increasing in size. The average duration of the case before a physician is consulted is apparently about 13 months. Pain, not infrequently ascribed to injury, may follow the development of the tumor by some months. The severity of the pain varies. It may be intermittent, a sensation of discomfort persisting between the attacks of pain. The pain may be continuous, dull, aching or sharp and shooting in character and may subside after a regression in the size of the tumor or an x-ray examination.

Pathological fracture in the osteoblastic periosteal sarcoma is of rare occurrence, but of all

the tumors of bone, Ewing's tumor is the one in which pathological fracture occurs least frequently. It is a little difficult to determine the general reaction to these tumors. There may be a fever as high as 104°F, but this is not characteristic as we have seen of this type of tumor. The fever is probably higher and more constant after metastases have occurred. In

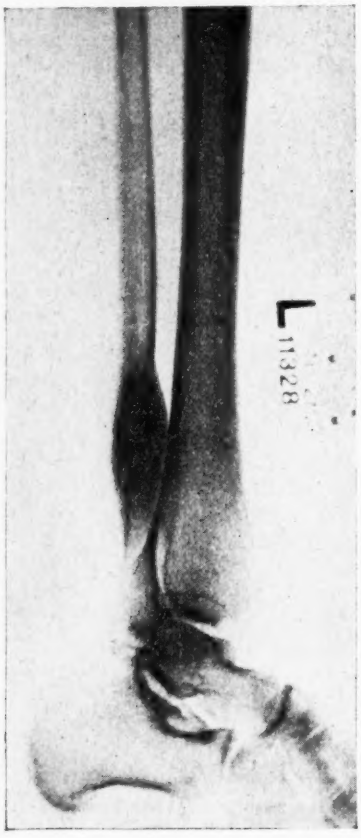


FIG. 4. *Osteomyelitis*, chronic and sclerosing in type of the lower part of the shaft of the fibula.

some cases there is a decided loss of weight early in the course of the disease, while in other cases the weight is fairly well preserved until the final stages of the disease.

In the x-ray the changes noted in the middle of the shaft of a long bone are usually diffuse. In the early stages the bone affected presents different appearances. In one case reported by Geschickter and Copeland the x-ray showed a shadow in the middle of the shaft and a widened but apparently well preserved cortex, with little or no periosteal changes; but an x-ray taken eleven days later revealed a fully developed Ewing's sarcoma, with an increased density of the tumor shadow and a definite periosteal reaction.

In the early stages of the tumor relatively little medullary involvement may be noted. There may be some expansion of the shaft accompanied by a periosteal reaction. In the later course of the disease, however, a considerable part of the shaft may be affected, the tumor growing apparently without much resistance parallel to the long axis of the bone. Besides the invasion of the marrow cavity, there are varying degrees of periosteal reaction. The increased density of the bone where the cortex is widened is the most definite evidence of tumor infiltration. The stalactite growths found in the osteoblastic type of periosteal tumor may be noted occasionally, but are far less common than in the periosteal osteoblastic variety. Ewing's tumor has been regarded by some as a tumor which is primarily bone destroying, but in some cases which have been studied the first evidence of bone infiltration was an increased density, evidently a bone sclerosing type of tumor.

This tumor seems at times to infiltrate rather than destroy bone. Later bone destruction may occur as the result of the interference with blood supply.

Whether or not the cells occurring in Ewing's tumor are endothelial in origin is still a matter of discussion. The clinical picture, however, is peculiar in that a single bone is involved early in the disease while later other bones are involved. Whether this is to be regarded as metastatic, or the involvement of the bone in a more or less general process, may still be a matter for discussion. The involvement of other bones does occur occasionally in other types of tumors. I have seen a pathological fracture occurring in a metacarpal bone after the arm on the opposite side had been disarticulated at the shoulder for a rapidly developing osteoblastic sarcoma of the humerus, which had an acute onset and was accompanied by a high fever, the onset and clinical course suggesting that of an acute pyogenic osteomyelitis. Ewing's sarcoma is confused at times with subacute or chronic osteomyelitis. Differentiation may be possible on clinical data, but a biopsy may be required. The necessity of biopsy will be discussed more fully later.

Ewing's tumor seems to arise subperiosteally. The periosteum is attached at the epiphyseal cartilage, which accounts for the involvement of the shaft. This location accounts for the tendency of the tumor to grow up and down the shaft. Pathological fracture is rare because cortical bone is not destroyed to any great extent. Whether this tumor develops from the cortex or subperiosteally is a matter for discussion, but the examination of specimens would seem to indicate that it is not medullary in origin and that it is not of necessity a bone destroying tumor.

It has been suggested that this tumor is metastatic, but no evidence has been produced to indicate that this is so, no primary tumor which could give rise to secondary growths is found and besides the morphology of the cells found in the growth would not indicate their origin from some primary epithelial growth which gives rise to these secondary growths in bone.

### MYXOMA AND MYXOSARCOMA OF BONE

Myxoma and myxosarcoma of bone form a group, the diagnosis of which may be suggested

by x-ray findings; but which may require a biopsy for a definite diagnosis. They are characterized by a tendency to transplantation in the wound and extreme malignancy. These tumors may be controlled temporarily by cautery removal, but they have a tendency to local recurrence and formation of general metastases.

### CHONDROMAS AND CHONDROSARCOMAS

Peculiar types of chondromas and chondrosarcomas occur. The differential diagnosis may be difficult. The chondroma and chondrosarcoma are particularly prone to occur in the upper end of the humerus, although they may occur almost anywhere. Multiple chondromas of the metacarpal bones are not of infrequent occurrence. Chondrosarcoma occurring over exostosis and destroying types of the same tumor occurring in other bones may cause considerable difficulty in diagnosis.

### DIAGNOSIS

The x-ray has made one of the greatest contributions to diagnosis of bone lesions. We must still, however, take careful clinical histories and correlate these with the data obtained by x-ray examinations. Even when this is done a positive diagnosis cannot be made in some cases. It is difficult at times to make a differential diagnosis between subacute osteomyelitis and a rapidly developing osteoblastic sarcoma; between a benign lesion, such as myositis ossificans, and a malignant tumor of bone which requires a radical operation.

Biopsy should be resorted to almost as a routine in the treatment of lesions of bone. The freezing microtome should be immediately adjacent to the operating room and the operating surgeon should become proficient in the study of these sections. He is the one who knows the clinical story; he is the one who should be able to correlate the clinical and microscopic findings. The objection may be raised that a biopsy favors the development of metastases, but the biopsy should be made when the constrictor is on. If the lesion is benign no harm will result; if malignant, immediate amputation can be performed. Amputation should only be performed on positive evidence. If the frozen section is not satisfactory, the final decision should be postponed until a positive diagnosis can be made. A permanent section may be required in this case.

Although the x-ray has contributed so much to the differential diagnosis of bone lesions, there is as much need now as ever before of a good clinical history in these cases. Clinical and x-ray findings must be correlated. The final decision as to the character of the lesion must be based upon a careful biopsy. An improvement in the diagnosis of bone lesions is the hope for improvement following treatment. Mikulicz once said that the results following resections for the treatment of malignant tumors of bone were as good as those following amputations. Mikulicz implied by this statement that the results, regardless of the methods employed, left much to be desired.

### Discussion

Dr. Carleton R. Metcalf, Concord: Dr. Lewis referred to osteomyelitis, and I am going to discuss the same subject. You can obtain in any text-book the symptoms, the high fever, the local intense pain, the possibility of previous infection and previous trauma; but occasionally we see a type which resembles an acute arthritis; for example, at the lower end of the femur we may get a red, swollen knee with fluid in it, and if a patient of that sort is put to bed and given salicylates, you are very shortly going to get a widespread infection of the femur.

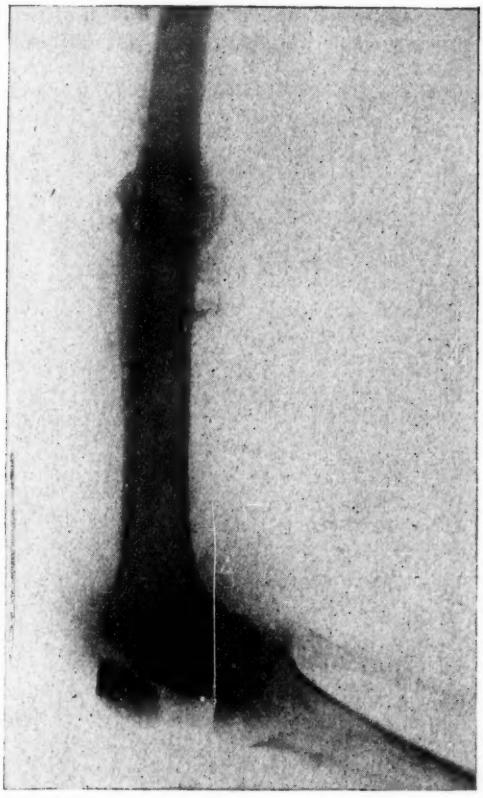

FIG. 5. *Chondromyxosarcoma* of the shaft of the femur.

So the chief point I want to make with regard to osteomyelitis is that if you find what looks like an acute arthritis, if it is monarticular, have in the back of your head acute osteomyelitis and do not treat it for a long time as rheumatism.

Now what has happened in the case I have just cited? Of course, there has been an infection close to the epiphysis which spreads to the Haversian canals and to the medulla. In a short period the canals are filled, but there is no destruction of bone early. Later on we do get destruction of bone, and certain areas of bone are walled off by the pus, by the infection, and that area of bone becomes the sequestrum. Now the sequestrum is primarily a piece of good bone

which has been surrounded by a river of pus. Still later on this pus appears at the cortex in various spots so that it looks like a colander, and we get a deposition of bone at the junction of normal bone. The deposition comes rather late, and the destruction comes fairly late, at least eight to ten days after the onset.

Now the x-ray shows two things—it shows destruction and it shows deposition. Therefore as we do not get those before the tenth day, the x-ray in an osteomyelitis case is often of no value in making the diagnosis at least during that

FIG. 6. *Periostcal Bone Forming Sarcoma of the Lower End of the Femur,* osteoblastic in type. Bone production associated with bone destruction occurs. The marrow cavity may be involved in the tumor growth at some distance beyond the point at which the greater part of the tumor is shown in the x-ray.

period of time of the first eight or ten days; and if you wish to make your diagnosis of osteomyelitis by the x-ray, the disease will often get ahead of you before you can get a positive picture.

As far as the bone tumors go, the age of the patient is of some significance because some diseases like cancer we expect in middle or advanced age. The sex of the patient is of some significance because if we have had a tumor of the prostate and subsequently get a metastasis, the assumption is that the two tumors are of the same type, but we are very largely and almost wholly dependent on the x-ray; and in those x-rays we look for four cardinal points in making the diagnosis.

First, the origin of the tumor; second, the question of whether there is production of bone; third, the state of the cortex; and fourth, the question of invasion on the part of the tumor.

Now by the origin I mean this—Does it start—if we can get it at the start—in the medullary canal or in the cortex or in the periosteum? For example, there is carcinoma, an epithelial tumor, which must be metastatic in a long bone, and must start in the medullary canal; sarcoma which may be primary or metastatic, but which is medullary; cysts which are medullary, and periosteal carcinoma which is cortical. In other words, the origin, the starting point, of your tumor gives you some clue as to the character of your tumor and enables you to eliminate certain types.

Second, bone production. There is none in cysts. There is none in carcinoma. There is

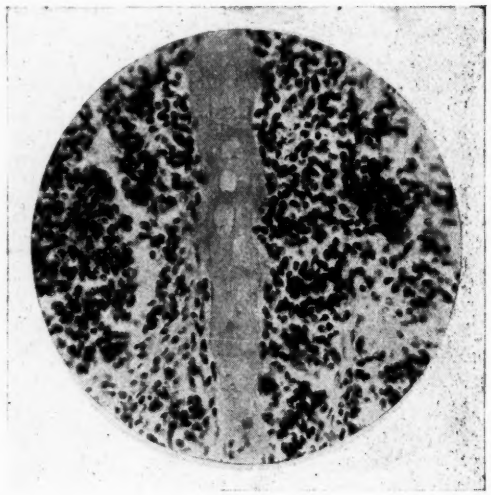

FIG. 7. *Histological Section of Ewing's Tumor of Bone (Endothelioma of Bone).*

none in spindle cell carcinoma and none in giant cell tumors so that if you have bone production, the chances are that those various types can be eliminated.

Third, is the cortex present or absent? Benign tumors expand it, and malignant tumors destroy it. Is it expanded spherically or cylindrically?

And finally have we the signs of malignancy, namely, invasion?

Now it is possible to work out a rule of thumb in these diagnoses; and like most rules of thumb it does not always pan out. Last year I made a report on a man who came into the hospital with a pathological fracture on what looked like a bone cyst and I followed through these various clues, in order to determine just what we had and finally concluded by elimination that it was either a myeloma or a cyst; and the reason I thought it was a cyst was that it seemed to be a single lesion. We could not find multiple lesions, and I so reported, hedging a little bit. On the evidence of the x-ray it looked like myeloma.

As a matter of fact, the man died about a year later from myeloma.

I want to suggest or emphasize just a few

points in this brief discussion. First, if you get in a child what is apparently an acute arthritis, particularly if is monarticular, think of osteomyelitis. Second, in an early osteomyelitis the x-ray is usually negative. Third, in tumors we are dependent very largely for a diagnosis or a differential diagnosis on the x-ray and we can to a greater or lesser extent put our finger on the right type of tumor by considering the origin of the tumor; second, the question of bone production; third, the condition of the cortex; and fourth, the presence or absence of invasion of the bone by the tumor.

Dr. G. S. Foster, Manchester, N. H.: First, I want to express my appreciation of this wonderful paper by Doctor Lewis. The subjects mentioned and the pathological processes studied through his wide field of efforts make his opinion most valuable.

I wish to ask Dr. Lewis if, in his reply, he will say a few words about multiple bone cysts. It would seem that we have enjoyed this paper very much and have learned a great deal.

Dr. Dean Lewis, Baltimore (closing): Dr. Metcalf has referred to the monarticular inflammatory lesions in children. I confined my remarks mostly to tumors, but I am glad that he has mentioned the monarticular inflammatory lesions. These are usually caused by the streptococcus or pneumococcus. The infection usually occurs on the shaft side of the epiphyseal cartilage, but close to it, and perforates the cortical bone and extends beneath the capsule of the joint, an arthritis developing. In many of these infections occurring in children the clinical course at the beginning is that of an arthritis, the bone lesion being discovered later. An x-ray diagnosis of a sequestrum is made upon the change in density, demarcation and contour. Biopsy is one of the most important methods of examination, and I would never amputate until I had positive evidence of a tumor and its kind.

It is difficult to make a diagnosis of myeloma in the absence of Bence-Jones bodies, but myelomas do occur without these bodies being demonstrated. About two years ago now we had a patient in the Johns Hopkins Hospital with a small carcinoma of the nose, near the ala. This was removed, and the time had arrived for a plastic operation, when the patient's doctor in New York telephoned that the patient had a pathological fracture of the clavicle due to a metastatic growth. He came back to Baltimore and I thought the patient had a multiple myeloma, at least the x-ray findings seemed to be quite typical. No Bence-Jones bodies appeared in the urine and there was no hyperproteinuria. The patient finally died and at autopsy extensive metastases from the small tumor of the nose were found. This was not a cornifying tumor, but one arising from glands at the mucocutaneous junction.

I never perform an operation upon a bone tumor without positive biopsy findings. Some years ago a man came to my office with a tumor of the great trochanter. I suggested a biopsy, which was refused. I visited a very good friend of mine a few days later and he was doing a beautiful resection of the head and upper part of the shaft of the femur. He intended to put in a bone transplant later. The tumor proved to be a metastatic hypernephroma. If a careful history had been elicited, it would have been found that the patient had had a transient hematuria of a few hours' duration about six weeks before. This should certainly have aroused suspicion. A biopsy would have prevented a useless operation. Multiple bone cysts are similar in histology to solitary cysts. It is with the solitary cyst that the surgeon has most to do.

## MISCELLANY

### TUBERCULOSIS IN NEW HAMPSHIRE

*The Open Air Messenger*, the official annual bulletin of the New Hampshire Tuberculosis Association, is an attractive and informative issue and is being distributed.

It is liberally sprinkled with photographs relating to some phase of the Public's participation in the campaign against tuberculosis. Among the excellent photographs shown are those of the winners in the 1929 Health Playwriting Contest for High Schools —Manchester (Central) High—St. Mary High and Laconia High. An excellent graph illustrates the significance of tuberculosis as the great cause of death in early and middle adult life, showing very clearly that tuberculosis still causes more deaths between fifteen and forty years of age than all of the deaths from heart disease, pneumonia, cancer, kidney disease and cerebral hemorrhage combined during the same age period.

The bulletin contains the annual report of the Executive Secretary, Dr. Robert B. Kerr, the address of welcome of President John G. Winant at the October meeting of the Association and the address of Dr. Paul Wakefield of Boston at this same meeting; also the annual report of the treasurer, Mr. Arthur H. Hale—and of the auditor, Mr. Clarence J. Murphy.

Dr. Kerr's report shows that the past year recorded the largest number of cured cases from tuberculosis and malnutrition in the history of the Association. A total of 580 adult cases were added to the cured lists this year, making 2783 cured adult cases now to the Association's credit. Four hundred children with early tuberculosis infections are also on the road to recovery.

Dr. Kerr's summary as to the probabilities for the ultimate control of tuberculosis in New Hampshire is as follows:

"In 1917 when the New Hampshire Tuberculosis Association was organized the yearly average losses in deaths caused in our state by tuberculosis were 536. In 1920 these losses had been cut to 470, in 1922 to 390, in 1924 to 333, in 1925 to 299, in 1926 to 319 and in 1927 to 294.

In 1928 the New Hampshire death statistics show that 305 died from the disease, a slight increase of 11 deaths over 1927, but a reduction of 14 deaths over 1926, and a large reduction over the preceding years.

The figure for 1928 by no means indicates that New Hampshire has stood still or lost ground in the fight against the disease. We know that owing to the efforts put forth by the members of the medical profession and public and private nurses in modern methods of treatment of the diseases, and the aroused interest among the afflicted themselves, the lives of many have been prolonged whom we have every reason to believe otherwise would have passed away.

Many proved to be incurable, and efforts in their behalf have been for the prolongation of their lives, their humane care, the relief of suffering, and the safeguarding of others from infection. There are still some of these on our lists.

We also know that by early diagnosis and prompt treatment large numbers, who otherwise would have progressed to the incurable stages, are now being checked and large numbers of advanced cases, that ten years ago would have died, are being saved.

The gauge of success is indicated in the tuberculosis death rate over a five or ten year period. The figures for the past twelve year period, which show very close to fifty per cent. reduction in the state, are full of hope and promise for final victory over the Great White Plague.

### 2400 SAVED FROM DEATH

No one can fully realize what this drop in the tuberculosis death rate means in bettering the conditions of life in New Hampshire. This year over 2400 persons are alive and well, who would have died from the disease had the rate of 1917 still prevailed. Many of these would have been heads of families. Such lives saved mean so many less widows and orphans. And it is well to remember, that for every death prevented at least ten times as many active cases are eliminated. When these facts are taken into account, we can really begin to realize the contribution made to the welfare of the state through the prevention of the disease. By learning how to control tuberculosis, we have prevented one, if not the greatest factor in producing poverty and misery.

When the control of tuberculosis became statewide in 1920, the death rate from the disease began to fall at a remarkably rapid rate. If the well organized campaign now in operation is continued, it should be entirely possible to bring tuberculosis down from the fifth place, which it now occupies among the leading causes of death, to one of the relatively minor positions. There is sound reason for the belief that by 1937 this can be accomplished. The work that has been launched should be increased and carried on with even greater energy in order to bring about a successful termination of the campaign in the shortest possible time."

## NEW HAMPSHIRE OPENS FIRST CANCER CLINIC

The first Cancer Clinic in the State of New Hampshire was opened at the Elliot Hospital, Manchester, N. H., on October 25, constituting the first organized movement in that state to combat the disease by the establishment of adequate diagnostic facilities.

The clinic has the hearty endorsement of the State Health Department and the Manchester Health Department, as well as the medical profession in general.

Dr. George C. Wilkins is the Chief of the Clinic's Staff, and has as his assistants a group of specialists representing the several branches of service of the hospital. The high voltage x-ray machine and the radium supply of the hospital will be available for the treatment of such patients as may be referred to that institution by the clinic.

The clinics are held each Friday afternoon and conducted primarily for diagnosis. They are in charge of the following Committee from the Staff: George C. Wilkins, M.D., chairman, A. S. Merrill, M.D., David W. Parker, M.D., John F. Holmes, M.D., Benjamin E. Sanborn, M.D., Daniel C. Norton, M.D., Elmer J. Brown, M.D., Ezra A. Jones, M.D., Frederick P. Scribner, M.D., George F. Dwinell, M.D., and F. L. Bulfinch, D.M.D.

Patients may be referred to the clinic by physicians, or they may apply directly. No charge will be made to patients unable to pay.

For the past three years the Elliot Hospital has been equipped with a 225,000-volt deep therapy x-ray apparatus and this department is under the supervision of a full-time roentgenologist. The hospital has an adequate supply of radium available and radium treatments have been given since 1920.

In an editorial commenting on the opening of the clinic, the Manchester *Leader* said:

"The establishment of the cancer clinic will be a boon to Manchester people and also those within easy neighborhood distance of the city. For the good of the State as a whole, it is to be hoped that institutions in other communities will follow the lead of the Manchester Hospital, to the end that evidence of the urgent necessity of methodical efforts to help the New Hampshire victims of the disease be brought to bear on the Legislature."

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## COMMITTEE ON ARRANGEMENTS FOR THE ANNUAL MEETING TO BE HELD AT CONCORD MAY 13-14, 1930.

Robert O. Blood, Chairman, Sub-Committees.

Committee on Scientific Exhibits: Henry H. Amsden, chairman; Walter Rowe, F. S. Eveleth, Clarence Ballard, Carleton R. Metcalf, George Leete.

Committee on Place of Meeting: Charles Parsons, chairman; Harold J. Connor, Arthur K. Day, J. Elizabeth Stevens.

Committee on Publicity: Dennis E. Sullivan, chairman; F. L. Newton, Barry H. Burgess, Loren A. Sanders.

Committee on Banquet: A. L. MacMillan, chairman; Edward J. Delaney, Charles Duncan, A. B. Howard, Robert J. Graves.

Committee on Recreation and Transportation: C. E. Butterfield, chairman; Marion L. Bugbee, David R. Brown, Sibley G. Morrill, Montfort D. Haslam.

Committee on Guests and Visiting Delegates: Charles Dolloff, chairman; Chauncy Adams, Fred E. Bryar, Thomas M. Dudley, Jules Brien.

Committee on Finance: James W. Jameson, chairman; Donald G. McIvor, George McGregor, Fred Taylor, Joseph Theriault.

## CHANGE OF ADDRESS

Charles Geo. MacDuffie from Henniker to Manchester, 967 Elm Street.

## DEATHS

Dr. John H. Neal, Portsmouth, died at his home December 12.

Dr. Edwin P. Fisher, Sunapee, died on December 21.

## NEW MEMBER

Alexandre Barbeau, 412 Cartier Street, Manchester, N. H.

## A REPORT OF THE WORK OF THE MEDICAL MISSION DISPENSARY, 36 HULL STREET, BOSTON, MASSACHUSETTS

With a record of 17,064 dispensary treatments and 6,360 free doctor's visits to homes, the Medical Mission Dispensary, located on the summit of Copps Hill, has completed its 47th year. During the past year 49 Medical Students from the Senior Class of the Boston University Medical School received instruction in Clinical Medicine and Obstetrics. During this same period there have also been twelve student nurses from the Senior Class of the New England Deaconess Hospital who have received instruction in clinics in the out-patient department, in bedside nursing as well as obstetrical work in the homes. The nurses' training school is accredited by the New York Board of Regents.

The work of the Mission was presented at 40 different occasions by the different workers at the Medical Mission, involving traveling more than 7000 miles. The Medical Mission is a member of the Boston Council of Social Agencies, the Boston Health League, the North End Civic Association, and during the past year has been admitted to membership in the American Protestant Hospital Association.

Dr. Joelle C. Hiebert, Superintendent, explains the purpose of the Medical Mission in the four words: Heal, Relieve, Teach, and Comfort; that is; to heal if possible; to relieve always; to teach the patients something concerning the sickness for which he comes in order to prevent a recurrence or spread of this disease; and to speak words of comfort and cheer to the sufferer and those made sad by his illness.

## WEEKLY HEALTH INDEX

Telegraphic returns from 63 cities with a total population of thirty million for the week ending December 7, indicate a mortality rate of 13.2 as against a rate of 13.3 for the corresponding week of last year. The highest rate (22.8) appears for Memphis, Tenn., and the lowest (5.5) for Fall River, Mass. The highest infant mortality rate (135) appears for Atlanta, Ga., and the lowest for Cambridge, Mass., Duluth, Minn., Kansas City, Kans., and Knoxville, Tenn., which reported no infant mortality.

The annual rate for 63 cities is 12.9 for the forty-nine weeks of 1929, as against a rate of 12.8 for the corresponding weeks of 1928.

Telegraphic returns from 64 cities with a total population of twenty-nine million for the week ending December 14, indicate a mortality rate of 13.6 as against a rate of 14.8 for the corresponding week of last year. The highest rate (23.2) appears for Nashville, Tenn., and the lowest (6.4) for Grand Rapids, Mich. The highest infant mortality rate (143) appears for Erie, Pa., and the lowest for Fall River, Mass., and Somerville, Mass., which reported no infant mortality.

The annual rate for 64 cities is 12.9 for the fifty weeks of 1929, as against a rate of 12.8 for the corresponding weeks of 1928.

## THE DISGRACE OF SMALLPOX

Smallpox continues to be the great discredit to this country in that three thousand more cases were reported in 1928 than in 1927 and reports seem to indicate that 1929 will show an increase over 1928.

No country in the world exceeds the United States in the reported cases of smallpox with the exception of India.

## THE VETERANS HOSPITAL NOW ASSURED

The act involving the expenditure of $15,950,000 for Veterans' hospital facilities has been signed by President Hoover and the Veterans Bureau has been directed to study the future hospitalization needs for incapacitated service men.

The increase of 4,491 beds for which provision was made in the act just signed will be distributed in 19 buildings, four of which will be neuropsychiatric hospitals. With this last measure expenditures for hospital facilities for veterans amount to $104,435,942, but even this will be inadequate, for veterans in contract hospitals will have to remain in these institutions until further provisions are made.

New hospitals to be built will be in Salt Lake City, Utah, West Virginia, Michigan and Hot Springs, Arkansas. Neuropsychiatric Hospital, Bedford, Mass. Additional facilities at Northport, Long Island, and a new hospital at Somerset Hills, New Jersey; new hospital in New York city; new neuropsychiatric hospital in Western New York State and additional facilities at Aspinwall, Pennsylvania. Others are to be erected in the South and West.

# NEW ENGLAND MEDICAL COUNCIL

THE sixth meeting of the New England Medical Council was held at Bellows Falls, Vermont, Friday, October 11, 1929, the meeting being called to order by Dr. B. L. Bryant, Vice-President, at 1:30 o'clock, in the Woman's Club room with the following named members and guests present:

Dr. Bertram L. Bryant, Bangor, Maine.
Dr. W. P. Bowers, Boston, Mass.
Dr. Eugene B. Eastman, Portsmouth, N. H
Dr. J. J. Cobb, Berlin, N. H.
Dr. George Anderson, Brattleboro, Vt.
Dr. Robert B. Greenough, Boston, Mass.
Dr. George E. Young, Skowhegan, Maine.
Dr. Thomas W. Luce, Portsmouth, N. H.
Dr. Edwin A. Hyatt, St. Albans, Vt.
Dr. H. O. Smith, Hudson, N. H.
Dr. D. E. Sullivan, Concord, N. H.
Dr. F. E. Farmer, St. Johnsbury, Vt.
Dr. C. F. Dalton, Burlington, Vt.
Dr. D. W. Parker, Manchester, N. H.
Dr. B. W. Paddock, Pittsfield, Mass.
Dr. T. H. Lanman, Boston, Mass.
Dr. George C. Wilkins, Manchester, N. H.
Dr. William Ellingwood, Rockland, Maine.
Dr. William G. Ricker, St. Johnsbury, Vt.
Dr. D. M. Stewart, South Paris, Maine.
Dr. L. P. Gerrish, Lisbon Falls, Maine.
Dr. J. A. Stevenson, Chester, Vt.

PRESIDENT BRYANT: I think you will agree with me that the first matter of importance in connection with this meeting is to call to mind the passing from us of one who has been our leader practically since we started this organization. Dr. James S. Stone probably did more for the New England Medical Council than any other man, and some reference should be made to our loss at this time. I will ask Dr. Greenough, who knew Dr. Stone well, to give us a brief obituary.

DR. GREENOUGH:—

James Savage Stone died in Framingham, Massachusetts, September 29, 1929, at the age of 61.

He graduated from Harvard College with the A.M. degree in 1894 and was given his M.D. degree from the Harvard Medical School in the same year. He was a surgical house-officer at the Massachusetts General Hospital, and was on the Surgical and Consulting Staffs of several other hospitals, being the Chief of the General Surgical Service at the Boston Children's Hospital until his retirement two years ago.

During the War, Dr. Stone was in charge of the Surgical Service at the Army Base Hospital at Camp Jackson, N. C., and while there suffered a severe attack of cerebrospinal meningitis, from which he was saved only by energetic serum treatment.

His great interest, apart from the surgery of children's diseases, was in the service of his profession through state and national organization. He was President of the Massachusetts Medical Society from 1925 to 1927, and before that time and afterward served on many of its most important committees. By a fortunate arrangement he was enabled after his retirement from the presidency, to continue his service to the Society as Executive Secretary.

He was keenly interested as one of the promoters of the New England Medical Council in the development of effective action through cordial relations and effective co-öperation between the State Medical Societies of the New England group, and at his death was President of this organization.

By his genial and forceful address; by his lovable personality; by his high ideals of service, his hatred of shams, and his shrewd New England common sense, he was able to give (as he did unsparingly) to his profession, to his community and to the public at large, a service of notable value in the promotion of their welfare and in the preservation of the Public Health.

DR. SULLIVAN: I would move that the body stand in silence for one minute in tribute to the memory of Dr. Stone. Motion seconded and carried.

PRESIDENT BRYANT: The matter of presiding over this meeting came to me rather unexpectedly, but I will try to carry on the business with your assistance. Is there any business to come before we start the program?

DR. PARKER: At the meeting a year ago this last June the officers for the ensuing year were nominated and elected. It occurs to me that this is the logical time to nominate and elect officers for the ensuing year, particularly so in view of what has happened, and I don't know whether this is the time that you wish to assign to the election of officers, but I offer the suggestion and I submit the following motion: that the officers for the ensuing year be nominated and elected at this meeting, and that a nominating committee of three be appointed by the Chair to bring in a list for consideration by this body.

Motion seconded and carried.

The Chair appointed as such nominating committee, Doctors Luce, Hyatt and Bowers

PRESIDENT BRYANT: The first item on our program is the report of the Secretary and Treasurer. As this has already been sent, in printed form, to all the members of the Council, have you any motion in regard to it?

DR. SULLIVAN: I move that the reading of these reports be dispensed with. Motion seconded, and carried.

PRESIDENT BRYANT: The next item on our program is the reading of a paper on "Education of the Specialist", by Dr. J. J. Cobb, of Berlin, N. H.

## EDUCATION OF THE SPECIALIST

BY J. J. COBB, M.D.*

*Members of the New England Medical Council:*

AT the last meeting of this council held in Boston on January 14, when the question came up concerning a subject for discussion at our next meeting which is here and now in session, I took the liberty to speak in substance as follows: "I believe there are some very important questions that should be considered by the New England Medical Council. After my remarks about the Osteopaths someone remarked that we ought to clean house ourselves and I entirely agree with that statement. There is a question of medical education which should be considered by this Council.

In looking over the third report of the Committee on Medical Education everything seems to be provided for so far as recommendations are concerned up to graduation and receiving the medical degree. No action has been taken or recommended concerning the preparation or training of the specialists. I believe the time has come as a matter of medical education when the training of the specialists, particularly of the surgical specialists, should be considered by the Medical Societies of the New England States and that some recommendation should proceed from these societies upon this subject.

We know that young men after practising a year or two, having had a limited experience in general practice, decide to limit their practice to some specialty. They go to some private or semi-private post-graduate school and take a brief course without any internship, without the opportunity of acting as assistant surgeon, or performing clinical work in their specialty. Returning home after a short course of observation only they announce that they will limit their practice to their chosen specialty. I believe a different method of training should be put into operation. I wonder if this Council wishes to take the matter up in the near future and discuss the possibility of getting some medical school like Harvard or Yale to establish such a school for training specialists from which course students may graduate receiving a diploma as graduate specialists. I believe the time has come when such a post-graduate school should be established and that the graduate should be registered by the State Board as a registered specialist. The trained nurse is not satisfied to be simply a trained nurse. She wants to be also a registered nurse. If it is important for a nurse to be known as a registered nurse why is it not equally important for a specialist to be known as a registered specialist? I believe this Council should interest itself in the future training of Medical and especially of the Surgical specialists. I have known young physicians in New Hampshire who, after a few months of post-graduate study, have returned to their homes and engaged in the work of the eye and ear specialists, doing the surgical work that requires years of training and experience necessary to acquire skill. We do have many specialists, honorable and good men, who have not had such a period of training but who after years of experience have become skillful in a specialty. But it is true we have many so-called specialists not properly trained and without the necessary skill. It seems to me that the time has come in these days of advanced medical knowledge when specialists should be known as graduate and registered specialists." This suggestion was discussed by Dr. Stone, Dr. Bowers, Dr. Blumer and others.

A motion was made, seconded and carried, that after the discussion of the training of the nurse had been completed, the next subject should be "The Training of the Specialists." At the meeting of the New Hampshire Medical Society in May the President in his address said: "The education and training of the specialist has not yet received the consideration that this important subject demands. Today the specialist is a specialist from choice. After some post-graduate study and observation in a private post-graduate school where there is no opportunity for actual work or internship assistance he announces to the public and to the profession that he now will limit his work to his chosen specialty. He is not a graduate specialist. He is not a registered specialist. I believe that in the near future the specialist should be both a graduate and a registered specialist. Some class A Medical school situated where there is an abundance of clinical material for its hospitals should be urged and induced to establish such a post-graduate school. Students accepted for training in the surgical specialities should be interns and assistants during the period of training which I

*Cobb—Chairman, Committee of Medical Education of the New Hampshire Medical Society. For record and address of author see "This Week's Issue," page 39.

believe should be not less than two years, better three years.

When such a course has been completed the student should graduate receiving his diploma as a specialist in his chosen specialty. The necessary legislative permission could be obtained for granting such diplomas and also for the registration of graduates in the various states as registered specialists. In the interests of the medical profession, the public and the specialists themselves, I believe the time has come when such a plan should be put into operation as a part of the general plan of medical education. The general practitioner has a legal responsibility for the results of treatment when he refers his patient to a specialist. I recommend that our permanent committee on medical education give this matter careful study and in connection with the New England Medical Council formulate some constructive plan to place before the selected Medical School." In accordance with this recommendation the Chairman of the Committee on Medical Education last year, Dr. Lord, in making his report to the House of Delegates of the New Hampshire Medical Society said: "We recommend that this committee be empowered by the State Medical Society to coöperate so far as possible with the New England Medical Council in its deliberations on all matters pertaining to medical education." This recommendation was adopted by the House of Delegates.

Through the courtesy of Dr. Bowers, Secretary of the New England Medical Council, the committee on Medical Education of the New Hampshire Medical Society are permitted to be present with you today. In what I have thus far said, first in quoting from my remarks at the Boston meeting of this Council and second from the President's address to the New Hampshire Medical Society, you will, of course, note much reiteration in the subject matter. I have purposely allowed this repetition to remain for emphasis. The general practitioner in the future will engage in the general practice of medicine and in some general surgery. He will be obstetrician and to a limited extent gynecologist. He will treat the minor ailments of the various specialties. If he is wise he will recognize his limitation and call to his assistance the services of the specialist, but he will demand that the specialist be a real one thoroughly trained. Good general surgeons are not as a rule prepared or equipped to do the work of the orthopedic surgeons. The specialist is an absolute necessity but he should be first a good general surgeon and then trained in orthopedic technique.

The eye and ear surgeon and specialist should be well grounded in general medical practice and in general surgery. Therefore, for a course of training in the surgical specialties such as I have indicated the doctor student should have had as a condition of admission several years' experience in general practice and in general surgery. I feel that it is not too much to hope that in the near future some medical school in New England will establish a post-graduate training school for the specialists giving such qualified students as may have the necessary time and financial means the opportunity of completing such a course and of receiving a diploma of graduation together with a suitable degree. In the words of Hamlet: " 'Tis a consummation devoutly to be wished."

PRESIDENT BRYANT: We will postpone the discussion on this paper until we hear the second paper, by Dr. William G. Ricker, on

## THE NEEDS AND OPPORTUNITIES OF SPECIALISTS

DR. RICKER*: *Mr. President and Gentlemen*—I shall not attempt to cover the entire field of specialism, but shall confine myself to personal observations and impressions gathered from my own experience, having practiced in the department of eye, ear, nose and throat in northern Vermont for the past eighteen years. The conception of the qualifications and opportunities of a specialist is by no means concrete or definite, but as I proceed I will endeavor to picture my own conception.

A large proportion of the work in the practice of medicine (you may consider it 90 per cent., 85 per cent., or 95 per cent.) in any case the great percentage of complaints and ailments, major and minor, are cared for by that group of men known as general practitioners and general surgeons. These men are perfectly capable of doing this work and handle in a perfectly satisfactory manner the great majority of cases that come under their observation. They are competent themselves and do not need the services of any one to aid them. Moreover after a physician reaches a certain age and has acquired a certain amount of experience the most of his work becomes routine. The majority of his cases fall into certain groups more or less uniform in type and differing in detail. In the conduct of certain cases, however, certain difficulties arise either concerning diagnosis or treatment. When these difficulties do arise he desires consultation. It may be a case of pneumonia in which he is satisfied as to diagnosis but wishes expert advice concerning some new therapeutic measure. Or it may be that he is uncertain concerning threatening complications and wishes diagnostic advice. In either case the need arises for consultation. Oftentimes a consultant is called for purely psychological reasons, but this does not enter into our discussion today. He is called for the purpose of aiding in the con-

*Ricker—Secretary, Vermont State Medical Society. For record and address of author see "This Week's Issue," page 39.

duct of the case. The physician desires a consultant with a superior knowledge of the particular problem; and such a man, that is, a man who can render expert opinion concerning, for instance, respiratory diseases, would in my opinion be rightly termed a specialist. The fact that he has a good thorough general knowledge of diseases does not preclude this term, if he can show that through special study, or experience, or ability, he is especially well informed along particular lines.

There are many conditions in the practice of medicine that call for technical information or expert opinion. In speaking of specialists one is inclined to think first of the eye, ear, nose and throat men. I am not so sure but what I would be inclined to call them technicians rather than specialists. There are other things more important to the welfare and health of humanity in general than eye, ear, nose and throat conditions. There is, for instance, the matter of orthopedics. The State of Vermont, through an anonymous donor, endeavors to provide skilled technical care for little children crippled with poliomyelitis. The donor and others have sought to procure a man willing and capable to undertake the surgery required for these little children. There are men in this audience who are surgeons, who will readily recognize the fact that experience in general surgery does not qualify a man to make the repairs for a serious case of loss of muscular functions following paralysis, but on the other hand special experience is required to qualify for this work. Here is an outstanding example of the need of a specialist.

The genito-urinary man in connection with his practice makes technical examinations of some of the hollow viscera—cystoscopy—and it is not a matter requiring especial ability, providing the examiner has the equipment, knows the manipulation of the instruments, and is familiar with the interpretation of the appearance of normal and abnormal viscera. But it is a type of work for which the general practitioner does not have either time or facilities. This particular work requires special equipment. If the physician has a case requiring such examination, the services of a specialist are needed.

Gynecology has been recognized as a specialty. However the dividing line between gynecology and general surgery on the one hand, and general obstetrics on the other hand, has always been rather indefinite.

Certain diseases require special examinations. A case of diabetes requires chemical examinations. Exophthalmic goiter requires a study of metabolism. Some particular conditions demand examination by the electrocardiograph, and there are others that we might enumerate. The examination in each case being highly technical and requiring special apparatus, lies somewhat outside the field of general practice. For the proper performance of these duties special requirements are needed, and men possessing these requirements are truly specialists.

In surgery men graduate from medical school, take their interneship and acquire a knowledge of general surgery, through observation in student days, acquiring experience during their hospital interneship, and begin their private practice with the inclination to become a surgeon. I believe these men should be encouraged in their work, reserving however certain particular conditions for special surgeons.

I have already referred to orthopedics. The surgery of the brain and spinal cord is extremely technical, and a satisfactory knowledge of general surgery combined with satisfactory skill does not necessarily qualify one to attempt the surgery of the brain and cord. Here again arises the need of a specialist.

The diseases of the skin fall in a class by themselves, and many a man who is well informed in general medicine, and who is prepared for good general therapeutic advice, will if conscientious admit his weakness when confronted with any unusual condition of the skin.

This has laid before you in a suggestive manner some of the needs that arise for the services of a specialist. Every practitioner feels the necessity sooner or later of calling on some one who knows more about a particular thing than he does himself. I would therefore define the specialist as a qualified special consultant. With the acceptance of that definition we would divide the specialists into two groups. The first are those who pursue only their own particular line; and second a group who practice general medicine to a greater or lesser extent, but who in addition are special students or have special experience along particular lines, and whose practice contains a large proportion of a certain group of cases. It is difficult to draw lines indicating the duties of the general practitioner in contrast to the duties of the specialist. I hope I have a reasonably liberal view of this situation.

My own answer is, that the general practitioner should treat each and every case, unless it is beyond his capabilities. As an example, the treatment of colds, coughs, sore throats and tonsillitis belong to him and not to the specialist. People may think that during an epidemic of colds I should be busy in my own office. As a matter of fact, I am not. These cases, in my vicinity, are treated, and rightly so, by the general practitioner. There is no reason whatever why he should refer them to a nose and throat specialist, unless complications threaten, such as sinus involvement, peritonsillar disease, etc. Otitis media, if not too severe or too prolonged, can well be treated by the general practitioner, and many are perfectly well qualified to do paracentesis. Simple inflammation of the eyes, conjunctivitis, would well be treated by the general practitioner, and unless recovery is prolonged or the symptoms indicate something more severe,

the services of a specialist are not required. When, however, there are indications of infection of sinuses or mastoid, or iris, or prolongation of discharge from the ear, or any other complication with which the general practitioner is not familiar, he should ask for the services of a specialist, and it is in these complicated cases that the specialist is needed.

Of what does the practice of the eye, ear, nose and throat man consist? Generally speaking, such a specialist does two things—refraction and tonsillectomy. These two procedures constitute the major part of his practice, in some cases as large as 80 per cent., depending on local conditions. There may be more or less treatment of the respiratory tract complications, the relief of deafness, and diseases of the eye; but generally speaking these are a minor part of his work, and it is for that reason that I have already referred to him as a technician. I believe that nearly, if not all of the work in pure ophthalmology with the exception of refraction between Portland, Maine, and St. Johnsbury, Vermont, could probably well be taken care of by one man were it not for geographical distances.

A man qualifies himself for the genito-urinary specialty, and because of that fact performs cystoscopy on cases referred to him. The general surgeon often fails to understand why he should refer a case of prostatectomy to the genito-urinary surgeon instead of doing it himself. The general surgeon, presumably, is well qualified to do this operation, and if so, it is his duty to perform it. This, however, detracts from the practice of the genito-urinary specialist. Cystoscopy is not a daily occurrence in a medium sized community, and if any one man in such a community should have it all, it would not be enough to give him a living.

The foregoing remarks are intended to show that from the professional standpoint expert services are required. They are required fairly often, but the urgency is greater than the frequency. The frequency of calls for services of a specialist are not great enough to maintain the comparatively few men who can truthfully be called such in a community as large as New England. I will agree that the education of the specialist today is chaotic, if indeed it exists at all. Many a man opens his office, coming from somewhere, and announces that he is going to be a specialist, or confine his practice to special diseases. But the mere fact of the announcement does not indicate that such will be the case. Few such really become specialists, although a few because of personality or other qualifications seem to hold that reputation for a long time.

This paper is intended to be an introduction rather than the solution of the subject of the specialist. The expert services of the capable specialist are greatly needed, but his opportunities to render these services are not as frequent as he might desire. Comparatively few men can take care of the total specialty work in New England.

### Discussion

President Bryant: Dr. Gerrish will open the discussion.

Dr. Gerrish: *Mr. Chairman and Members of the Council*, I am sure that we all appreciate these papers which are very much to the point.

As for the need of the specialist, I think there is a real need, and there is an imaginary need, and the imaginary need should be considered in this discussion as well as the real need. I want to emphasize, that 90% of the sick may be perfectly well taken care of by the general practitioner. He is the man who knows the family history, and has had the advantage of many years of contact with the family. But, it is the imaginary need, on the part of the public, for specialists, that has created an altogether different condition of affairs. Everybody in the world, in this day, seems to think that every child, or every father or every mother is entitled to the highest priced internist or surgeon. The question is, who is to blame for this? While en route to the A. M. A. meeting in Portland, there was about an equal number of specialists and general practitioners in our car and many were the arguments on this subject. The final decision seemed to be that the public are to blame, that the public needed education, and that the doctors lacked co-öperation. Personally, I think that we are somewhat to blame, as general practitioners, for this imaginary need on the part of the public for specialists. For years, throughout rural New England, when a critical case has arisen, the physician in charge has frequently suggested to the patient that he had better go to a bigger town for somebody to help out; this custom has been drilled into the people, this going to a little bigger town to have somebody deal with the case, and many times, some practitioners have not co-öperated with the competent men in their own towns. I think possibly there is a chance for us to clean house a little bit; many times the general practitioner chooses his specialist, possibly through friendship or through personal contact, and this is not as it should be.

If you will pardon reference to Dr. Cobb's paper, medical education may be somewhat to blame for this imaginary need of specialists. A man goes through college and gets the degree of A.B., or B.S., and after some specified amount of time, or work, gets the degree of A.M., and is then recognized by the people as an educated person. But, in medical education, there is failure to certify as to "who is who." Medical education is certainly somewhat to blame in this imaginary need for specialists. Legislation might possibly help. If certain laws were passed that might give a different viewpoint.

As for the opportunity of specialists, if there were to be another world war tomorrow, it would no doubt be won by specialists, possibly special-

ists in the air, and so in the war against disease, one of the greatest opportunities for the specialist is to keep our profession up and abreast of other professions, and abreast of these at all times.

PRESIDENT BRYANT: Dr. Blumer was to be here to carry on, but being unable to come he has sent on a paper, and I am going to ask Dr. Bowers to read this paper of Dr. Blumer's.

DR. BOWERS: Dr. Blumer wrote me several days ago that a very prominent man in his community was suffering with coronary occlusion. He expressed his regret, for as you know, he has been very much interested in attending these meetings. His discussion is in reference to Dr. Cobb's paper, and is as follows:

### DISCUSSION

GEORGE BLUMER, M.D.: The dictionary defines a specialist as a practitioner who devotes himself to a special class of diseases. Perhaps it is hardly necessary before an audience of this sort to define a specialist, as all of us have pretty clear cut ideas of what the term indicates at the present day. It is of course a matter of historical knowledge that as medicine itself has become more and more complex both the number and the variety of specialists has increased. It is also well understood that specialism has not only its advantages but its drawbacks, and one might add that the drawbacks are to a considerable extent dependent upon the method which an individual chooses of going into a specialty. Certainly the older practitioners amongst us believe for the most part that the best specialist is a man who has had a fairly extensive training as a general practitioner, and a generation or two ago the great majority of specialists in this country were men who had started out as general practitioners and had later picked out some special subject in which they were particularly interested and had developed themselves as experts along some particular line.

The main disadvantage of a specialist who devotes himself to a particular subject from the beginning of his career is narrowing of outlook, which engenders much more quickly in him than in one who comes to a specialty from general practice that tendency which is common to all specialists who, seeing in every case evidence of some disturbance in the particular system in which he is interested, often overlooks important general considerations. On the other hand the advantages of specialism are very great, not only from the point of view of the advance in knowledge of the entire subject, but also because the specialist acquires an expertness in the use of the tools of his particular specialty which the general practitioner can seldom acquire, and he accumulates experience which the general practitioner can never accumulate. Furthermore, on account of the high prices which a specialist can charge, it is often possible for him to set aside periods for reading and study which the general practitioner may not be able to afford.

At the present time there is no law in any state that I am acquainted with that prevents a man from putting himself forward as a specialist in any branch of medicine he chooses, provided he has obtained an M.D. degree and fulfilled the requirements of the state boards. As stated previously, the increasing complexity of medicine tends to multiply the number and variety of specialists, and it may be added that the greater ease and the better remuneration of specialists attracts more and more men from the field of general practice into the field of specialism. This being the case, it is essential not only for the good of the public but also for the reputation of the profession that an individual who calls himself a specialist should really be an expert in his line. All of us who have had experience with specialists in the various medical subjects are fully aware at the present time that there are a considerable number of self-styled specialists who have no real claim to the distinction which the name implies. It does not follow from this that they are unsuccessful from the point of view of the public or from a financial point of view, but from a strictly professional point of view they are many of them lamentable failures, and they only get by with the public because they happen to be engaged in some field of work where failures are not particularly obvious. It should of course be the aim of the medical profession to bring the competence of all practitioners to as high a level as possible, and this brings up the question of the method of training and the method of accrediting specialists.

There have of course been some specialists in this country for many generations, and in the early days of specialism most of them, as already stated, evolved from the general practitioner. What usually happened was that these men began to take an interest in some particular subject, devoted special study to it, perhaps took a short post-graduate course in Europe, and finally announced their intention of devoting their entire time to it. So long as there have been special hospitals there have also of course been a certain number of men who developed into specialists through training as house officers in such hospitals. In recent years the conditions surrounding medical education, both in the undergraduate and the graduate periods, have changed enormously. A generation or two ago there was little difference between the curricula of the different medical schools, at any rate on paper. Nowadays the curricula of medical schools are so arranged that students may begin to specialize even in their undergraduate days. Furthermore, the number of special hospitals and the number of hospitals maintaining special departments has been steadily increasing, so that the opportunities to obtain a training along some particular line during the period of interneship have increased enormously. In

addition, scholarships and fellowships which permit the holder to follow special lines are constantly increasing in number.

It is questionable perhaps whether it is desirable to formulate rigid rules for the training of specialists. There are however certain principles which may be stated as follows: (1) That before entering on a specialty a physician should be required to have passed through a period of general experience. This period could take the form of a general interneship in a recognized hospital, or it could take the form of a period of general practice. It is doubtful whether it is advisable to place any definite time limits on this phase of training. (2) The training in the specialty should be recognized as sufficiently lengthy by the men best qualified to judge of this, namely by men practicing this particular specialty. (3) Before being allowed to practice as a specialist an individual should be able to present evidence of satisfactory training. If the time ever comes when individuals are licensed in specialties by state boards this evidence will doubtless have to be partly documentary and partly the result of examinations. It is a question in my mind whether the license for practicing a specialty would not better come through a board composed of practitioners of the specialty in question rather than through any general board such as might be appointed by the state. (4) It is probable that if any system of supervising the training of specialists and ascertaining their competence is officially adopted it will be necessary to permit them to use some special designation indicating their competency. I think it is essential that the mistake shall not be made of assuming that there is only one way to become a specialist, and that if any laws or regulations are formulated by state boards or associations of specialists they should take cognizance of this fact.

Dr. Robert B. Greenough: It occurs to me that standards of professional accomplishment in this country have already been set up in the great specialty of surgery by the American College of Surgeons; and the letters F.A.C.S. may be accepted as indicating that an individual has devoted sufficient time and ability and has passed such tests as to be regarded in the opinion of his colleagues, as qualified to practice surgery.

The American College of Surgeons further recognizes surgeons who have specialized in the fields of Genito-urinary Surgery, Nose and Throat diseases, Orthopedic Surgery, Gynecology, Obstetrics, Ophthalmology, and Otology. The College recognizes the certificates issued by the American Board for Ophthalmic examinations; and the American Board of Otolaryngology as adequate evidence of qualification to practice in Ophthalmology and Otolaryngology.

So far as medical specialties are concerned, I understand that the American College of Physicians has been organized to fulfill much the same purpose, although I am not familiar with its exact details. The American College of Radiologists is also attempting something of the same nature for x-ray specialists. It would seem to me that these efforts to set up a standard are very desirable and should be supported.

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I was told last week that a two-year course in Orthopedic Surgery is now in process of organization and will be offered to Graduate Students, who have had a surgical hospital Interne Service, by the Harvard Medical School. This course consists of two years of service as Orthopedic Interne in different hospitals and in the Medical School Laboratories. Such a course given to a man after he has graduated from the Medical School and after he has completed a Surgical Service in a General Hospital should I think qualify him, if it is in him to be qualified, to go before the world as a specialist in Orthopedic Surgery.

Dr. Luce: It seems to me we are getting a little away from what Dr. Cobb has in mind. Dr. Cobb uses the parallel of the registered nurse, and we all know what that means. I doubt if many of you who have a nurse know whether she is registered, but she knows.

Dr. Greenough speaks about the American College of Surgeons. Most all surgeons attempt at some time to get into the College. If they do not succeed, these surgeons do a lot of explaining, that this does not mean anything, but this usually comes from a man who is not in the College. It means something to be a member of the American College of Surgeons, just as it does to be a registered nurse. At the hospitals the American College of Surgeons say you must do so and so to be placed on our credited list. Every reputable hospital wants to be recognized by the American College of Surgeons. If the American Medical Association or American College of Surgeons will show that any particular specialist is recognized according to certain standards and qualifications, it seems to me, in ten or fifteen years time, that most of the specialists would want to be so "registered."

I am going to offer a resolution that Dr. Greenough be appointed as a committee of one, to confer with the powers that be at the Harvard Medical School, taking Dr. Cobb's paper as a basis, and report back to us some plan whereby something of this sort can be brought about. Here is a chance to do a really constructive thing. I offer this resolution, that Dr. Greenough confer with the Medical faculty of Harvard University and bring us back any suggestions or opinions that the consensus there has to offer him, and see if something can't be done in New England to offer the competent specialist some evidence that he is qualified.

Dr. Greenough: I don't wish to appear to

decline that duty. I am glad to serve, but Dr. Blumer has shown great interest, and I wonder if it would not be well to approach the authorities of Yale as well as Harvard Medical School.

DR. LUCE: I will amend my resolution by adding to it the names of Dr. Blumer and Dr. Bowers.

Motion, as amended, seconded, and carried, and the resolution adopted.

DR. RICKER: Perhaps some of you know the yardstick that already exists—and more especially in New England—covering eye, ear, nose, and throat practitioners. The American Board of Ophthalmic Examiners has been in existence about twelve years. The examination is a very thorough one. As I took it twelve years ago, I filled out a sheet covering my identity, education, experience and postgraduate work. A written examination was given, containing three technical questions. You either knew the answers or you did not—easy if you knew them, impossible to answer if you did not. One, I recall, was a mathematical question covering refraction. The following day we progressed through eight different rooms at the Manhattan Eye and Ear Hospital, making examination of patients or specimens in each room, examining the fundus in one room, the extrinsic muscles in another room, pathological specimens in another room, gross refraction in another room, and so on. This board issues a certificate and publishes a directory, and yet I dare say the majority of you did not know of the existence of such a board. The nose and throat men also have a national examining board which I am told is equally good. The other yardstick in New England is the New England Ophthalmologic Society, which meets once a month and is composed of about 100 men in New England. Today one requisite for membership is a certificate from the American Board of Examiners. So that, if you men wish the advantage of a specialist in a territory where you are not familiar with individuals, you can usually write the secretary of the New England Ophthalmologic Society and find out who is who. However, this yardstick is about the same value as the yardstick of registered nurses and domestic nurses, and holding a certificate from the American Board of Examiners by no means guarantees enlarged practice. The specialist will be judged by his attainments. The physicians in and about St. Johnsbury don't send all their cases to me. So you have two standards by which to judge your individual, his pedigree or paper attainment on the one hand, and your personal knowledge of him on the other hand. I would like to ask Dr. Greenough if the graduates of the Massachusetts Eye and Ear Infirmary, who are the younger specialists, are affecting the condition in and around Boston.

DR. GREENOUGH: I don't know that I can answer that fully. I do think that the value of the men who have had an interneship there, with two years' service, has become very much increased. I think that there is one difficulty about the graduates of the Eye and Ear Infirmary, which rests upon the fact that they usually take that interneship, not as graduates of other hospitals, but immediately on leaving the medical school, and they have not all of them had enough general training.

DR. RICKER: My impression is that the graduate knows ten times more than I do concerning technical facts of the eye but that I am a better judge of headache than he is.

DR. GREENOUGH: There is also some evidence on that; the Eye and Ear Infirmary and the Massachusetts General Hospital work in close affiliation. When a case from the Eye and Ear Infirmary is sent to the General, we usually have to make a new, complete study of that patient. At the Infirmary, they have focused especially on what interests them in relation to the eye and ear, and the rest of the patient is not given as much consideration as we think it advisable to give to every patient that comes to the hospital.

DR. PADDOCK: It seems to me a very simple thing to plan to pass legislation, or plan just for the education of the specialist, but it is another thing to get such a condition as that before the public. To the public one doctor's sign is just as good as another man's, and there does not enter, in the mind of the public, the matter of skill, or personality, but simply that he is a doctor. How these facts can be made clear to the public, without introducing advertising methods, is to me the difficult feature in this entire situation, with the elimination of the men entirely unfitted for certain lines of work.

PRESIDENT BRYANT: I will ask Dr. Cobb to close the discussion.

### CLOSING DISCUSSION

DR. COBB: In my paper I have said about all I want to say upon the subject of "Training of the Specialists." The registered doctor, or the family physician, has the legal right to practise any specialty he wishes. We cannot expect or ask for legislation to prevent this practice. Special training must remain optional. I expect it will be many years before this plan will come into general use. My thought is that it is now time to start along in this direction. I hope the time will soon come when the surgical specialist will want and obtain the degree of Master of Surgery, and other specialists the degree of Master of Medical Science. It seems to me that the New England Medical Council can

render to the public and to the medical profession no greater service than to secure the establishment at Harvard or Yale of such a post-graduate school. I trust the committee appointed for this purpose will stay on their job until results are obtained.

DR. RICKER: I want to correct, if possible, a misapprehension with reference to the fact that a surgeon did all the surgery he possibly could. Please do not think I disapprove of that. I think that is as it should be. I think the general practitioner should take care of everything, and the surgeon should take care of everything he possibly can, reserving the so-called specialist, or reserve man, as a consultant.

DR. SULLIVAN: If some one forcefully stressed the present system of education in our medical schools, then we could well have a paper on the training of the medical man as a general practitioner. I think this whole question would be much more easily solved if the medical student of today was given a proper opportunity to fit himself for the practice of medicine, regardless of specialties.

In the days of preceptors and bedside contact, and frequent intercourse with professors, I am satisfied that medical students get much more practical benefit than they do today with all of the newer additions to the curriculum. We can see demonstrations of it on every hand. An eminent man told me that his first case of measles was diagnosed by a wash-woman in the house. A recent graduate of a Class A school saw a case of shingles, and did not have the least idea of what it was. In a small hospital a surgical assistant complained that the technician is not on duty twenty-four hours a day and in a supposed appendicitis case coming in after 6 P. M., he was not able to get a white blood count.

If men would only stick to the fundamentals of physical diagnosis and depend less on facilities of a laboratory, we should have much better and much safer men. Of all diseases to be handled by the average practitioner, the problem that they have is what to do with the 90% and not with the 10%. Dr. Frank Billings, some years since, maintained that the graduate should be fitted to recognize with intelligence and treat 85%-90% of the cases appealing to him for advice.

If you are going to have specialists designated as such, who is going to pass on their qualifications? You will have to have specialists in public health, dermatology, occupational diseases, radiology, et cetera. Who will be the Daniels come to judgment?

Organized, legitimate medicine is suffering from the fact that you are turning out men who are not fitted to practice general medicine, and that is one reason why men will not go into the country, because they are not trained to practice at the bedside. And we have technicians without any definite knowledge of medicine, not graduates in medicine, who have allowed themselves to go along just one line. No one is a safe man to practice a specialty unless he knows the whole human body, and I believe the requirements should be made that a man should at least put five years into general practice before he could go before a Board to be examined for a specialty.

At the meeting of the American Medical Association at Portland, Oregon, last July, its President, Dr. William S. Thayer, gave a masterly address on the necessity of using the physical methods of diagnosis to a greater extent than used by some at the present day and not rely so much on the findings of the x-ray and the technicians unless they agreed in a large measure with your own diagnosis.

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PRESIDENT BRYANT: I think the time always comes in every organization of this kind when there should be a short review of the subjects considered in order to see what has been accomplished. Perhaps also a few minutes should be spent in looking toward the future problems of the medical profession, especially the medical profession of New England. A number of the members of this council have come in since the organization was started and I am asking Dr. Bowers to give a short résumé of the work we have been doing, the subjects considered, and what has so far been accomplished. Then I am asking Dr. Parker for a short talk as to outlook and future work for the Council. We have been handling a good many subjects and obtaining considerable information for ourselves, but are we carrying these through to the point where they are of any special value to the profession of New England?

DR. BOWERS: I propose to give just a simple résumé of what has happened in the formation of the Council, so that those who have come in with the rest of the men of longer service, may have some idea of what has gone before.

In June 1926, the Massachusetts Medical Society held its Annual Meeting at Springfield, Massachusetts.

Dr. David W. Parker of Manchester, New Hampshire brought the greetings of the New Hampshire Medical Society and introduced a subject which had been in his mind for some time. He felt that although cordial relations existed between the State Medical Societies of New England, much could be accomplished by meetings consisting of representatives of the several societies for discussion of problems of common interest and the exchange of opinions with respect to the policies pertaining to the organization of medical interests for the purpose of increasing the efficiency of medical service.

These suggestions stimulated similar sentiments in the minds of members of the Massachu-

setts Society and in the following November Dr. James S. Stone, then the President of the State Society, called a meeting of the presidents and secretaries of the several New England Medical Societies for a consideration of the proposal made by Dr. Parker.

Twelve persons attended this meeting, representing Vermont, New Hampshire, Maine, Rhode Island and Massachusetts.

A letter was received from Dr. Frank H. Wheeler, representing the Connecticut Medical Society, endorsing the proposition.

The conference brought enthusiastic approval of the plan and a temporary organization was formed consisting of the presidents and secretaries of the several New England State Medical Societies and three delegates at large. This temporary organization was later made permanent.

The next meeting was held in Boston in January 1927, and subsequent meetings have been held in June 1927 at Portsmouth, New Hampshire, following the meeting of the New Hampshire State Society; Boston, November 4, 1927; Belgrade, Maine, June 19, 1928 following the meeting of the Maine State Medical Association; Boston, January 14, 1929 and now today in Bellows Falls, in connection with the Annual Meeting of the Vermont State Medical Society.

Subjects discussed at the several meetings are: Insurance, The Workmen's Compensation Laws, The State Registration of Physicians, Interstate Reciprocity, Rural Medical Supply, The Woman's Auxiliary, Medical Education, The Education of the Public with Reference to the Cults, The Education of the Public with Respect to Public Health Problems and The Education of Nurses.

These subjects have been presented by members of the Council and invited guests. The reports of the meetings have been published in the NEW ENGLAND JOURNAL OF MEDICINE and reprints sent to the officers of the several State Societies and all members of the Council.

The State Societies have contributed an equal amount of money in order to pay the expenses of the Council.

Each person in attendance should submit a schedule of expenses on returning home and the secretary-treasurer will ask each Society to forward the contribution.

(The financial report of the last meeting was explained showing two cents in the treasury; all bills having been paid.

Following this report an appeal was made for the return of corrected proofs of papers and discussions promptly.)

SECRETARY BOWERS: I would like to offer, for your consideration, the suggestion that since Dr. Cobb was invited to come here, and is a guest of the Council, that he may very properly charge up all expenses incident to his travel here, and I am sure that the service which he will render to the New Hampshire Society will be duly appreciated by that Society, but I feel that this Council is under obligation to meet the expenses of this guest who has been courteous in coming and delivering this paper. I think that can be adjudicated by the President.

## INTRODUCTION OF NEW MEMBERS

DR. PARKER: There are men in the Council who are here today that I have not met before. We have a man from New Hampshire, our President, a man who, we think, is very able and fine in every way. Dr. Smith, please stand; I will introduce him to the meeting.

DR. SMITH: I am very glad to stand up, but must ask your indulgence in the matter of speaking.

PRESIDENT BRYANT: Dr. Anderson, elected today as president of the Vermont State Medical Society.

DR. ANDERSON: Although this is my first visit to one of these meetings, I hope it is not to be my last.

PRESIDENT BRYANT: Dr. Stewart, of the Maine Association.

DR. STEWART: This is a new experience to me. Like Dr. Smith, I am an ex-officio member, but there is no doubt but what these meetings ought to be beneficial. Certainly our interests are common. In looking over the crowd it impresses me that a great many are specialists. In fact, it has seemed as though our Maine Society was controlled more or less by specialists. Anything that I would say would have to be from the standpoint of the general practitioner. In the recent discussion I ought to have expressed my opinion on the subject. It seems to me that the demand for a specialist should come from the general practitioner. Because that is not recognized may be the reason why we have so many specialists; because it is an easier form of practice and there is larger remuneration.

PRESIDENT BRYANT: Dr. Farmer:

DR. FARMER: I am very glad to be here at this meeting with you. It seems to me that I can see an analogy between this meeting and some of the prayer meetings we have up home. There are a lot of old maids and old ladies that go there, and the minister preaches to them, but the devils that should hear the sermon don't attend. I was wondering how we are going to get this message across to the sinners outside. I hope there is some way of doing it.

PRESIDENT BRYANT: Dr. Paddock?

DR. PADDOCK: It is a very great pleasure to attend this meeting, and I enjoyed driving through your hills. This meeting is a very splendid thing. It is one thing to read a paper, and one thing to suggest, but it is another thing to put across, and I was hoping that Dr. Bowers would tell us how many of these things had been accomplished.

PRESIDENT BRYANT: Dr. Parker?

DR. PARKER: Dr. Paddock, I think, suggested that Dr. Bowers might have told in his résumé what had been accomplished. As he said, this thing was formed and was taken up very enthusiastically, but it was, and still is, a very young child, but I am personally convinced that it has already justified its existence. In the first place, in New Hampshire, we have taken advantage of the discussions and recommendations of this Council in the matter of medical defence. Dr. Bryant gave us a very able discussion of the Maine plan. It was discussed by a Vermont representative, and you have a very good plan in this State; then it was referred to a committee, who brought back recommendations, these were taken to New Hampshire and acted upon, so that at the present time we have a Medical Defence Council, a local Council, and all the machinery working as well as it could in the first year of its existence; we believe it is already bearing fruit, and as time goes on it will be more and more valuable to us. I think that that alone, if nothing more, has been accomplished and justifies the existence of this body.

Another thing in which the Council has been instrumental is the changing of the BOSTON MEDICAL AND SURGICAL JOURNAL from a State Journal to the NEW ENGLAND JOURNAL, which is becoming, and we hope will become the official organ of all of New England. As I have said before, New England is a geographical unit, and it should be represented by a single unit, or publication for the expression of our common views, and if we can bring that about, and I believe that this Council can be instrumental in doing it,—it will prove to be one of the most valuable things that we have done.

I can see a distinct advantage, which I think you men can have, in a common publication, which is yours and mine, as well as the Massachusetts Medical Society publication, to represent us before the profession of the rest of the United States, as well as of New England. I think that is distinctly worthwhile.

I understand that Vermont, yesterday took a vote which is along the line of making this in fact, as well as in name, a NEW ENGLAND JOURNAL. Furthermore I think that these things which we have discussed, and upon which recommendations have been made should not be just taken back to the societies, and allowed to drift. I think they should be followed up, and if everything has not been done that should be done to put them into practical effect, that they should be taken up again and emphasized so that they may be made effective.

I have not any suggestions for the future, except that I think the matters we take in this Council should be of vital, present-day interest to the different state societies of New England.

DR RICKER: Will Miss Nott please read the resolution passed by the Vermont House of Delegates yesterday.

Reporter read resolution as follows:—

> "That we approve an attempt to arrange with the Massachusetts Medical Society to own and operate the NEW ENGLAND JOURNAL OF MEDICINE, through the New England Medical Council, if agreeable to the Massachusetts Medical Society, when and if four other New England States join in the effort."

PRESIDENT BRYANT: Couldn't somebody draw up, before the next meeting, a plan which could be presented to all the other state societies, a plan of re-organization to be presented at the January meeting?

DR. PARKER: Yes. I will make that a motion. I would like to have Dr. Bowers bring in some statistics on finance, etc.

Motion seconded.

PRESIDENT BRYANT: Does that meet with the approval of the Council? It is carried.

DR. WILKINS: I mentioned what might be a subject to be considered by this Council. It seems to me that whatever is considered should be something of interest to the Medical Societies, as such, and I wonder whether the question of the kind and type of meetings that are being held by the different Medical Societies throughout New England, are worthy of consideration, not with the idea of developing a standard form of medical meeting, but to bring forth ideas from men who have been observing medical meetings for a good many years, with suggestions from different parts of New England, which might help us and give us ideas that could be used in our own societies, because I think that some changes in the type of meetings stimulate interest and increase the attendance.

DR. BRYANT: That is a good suggestion and will be referred to the Standing Committee.

Place of meeting?

DR. LUCE: I move that it be left with the Executive Committee. Motion seconded, and carried.

DR. RICKER: And Boston be favorably considered.

DR. BRYANT: We will have the report of the Nominating Committee.

DR. LUCE, for the Nominating Committee, reported as follows: For President, B. L. Bryant; Vice-President, George Blumer; Secretary-Treasurer, W. P. Bowers; Executive Committee, H. G. Partridge, E. A. Hyatt.

DR. RICKER: I move that the report of the Nominating Committee be accepted, and that the Secretary cast one ballot for the nominees presented. Motion seconded, and carried.

PRESIDENT BRYANT: The ballot is cast, and I declare these nominees elected.

I realize that there is much this Council can do, but we must abandon dead issues and get at something alive, which is affecting the medical profession throughout the New England States. When we start a thing that is worthwhile the subject should be kept before the Council by a Committee in charge until definite recommendations have been adopted or action obtained.

I believe these reports should have a wider circulation. They should be sent to every member of the State Councils of each New England State, to every president and secretary of the local county societies and to the president and secretary of each State association. Those of us present should report back to our State Association, but sometimes we are lax. We would be sure to have this accomplished if these were sent out direct from our own Secretary's office. If any of you wish that these reports should be placed in the hands of others, you can write to the Secretary and have copies mailed to any one to whom you think they would be of interest.

This regarding the medical schools should be sent to those of New England who are interested in that work, and, as we have voted today, someone should be designated to take these reports to persons interested and bring back a report to us as to their reception. I think we have got to carry on.

Another thing, here is a report of the Five Year Program on the Cost of Medical Care, of which committee Dr. Bowers is a member. I think Dr. Bowers should keep us informed as to the progress of that group. How can those of moderate means have adequate medical care? If we do not take this up as a medical study here in New England and if the medical profession does not take the lead in solving the problem, somebody from outside is going to step in and the work will be organized by lay bodies. The physician, instead of being the leader and the man who ought to find the remedy, will be the hired man, and that within the next few years. It is up to the medical profession to shape their course while the opportunity presents itself,—to abandon this superior air in relation to the rest of the people in the State. The laymen are doing a lot of thinking at the present time and much depends upon us as to what their future attitude toward the profession will be. These problems must be worked out and the best place is here with the representatives of all the New England States.

While conditions may vary in the individual States comprising this group, the underlying problem is the same. We should have some frank discussions along the line of the work of this committee of which Dr. Bowers is a member and we should be informed of the progress of that committee and be able to furnish suggestions as it affects us in our locality.

Is there any other business to come before the meeting?

Moved that the meeting adjourn. Motion seconded and carried. Adjournment.

## DIAGNOSIS CENTRE FOR CANCER URGED IN NEW YORK

The establishment in New York City of a central bureau of cancer diagnosis, similar to the institutions in Buffalo, Boston and Philadelphia, was urged December 24 in an address on cancer service by Dr. James Ewing, cancer authority, before the Medical Society of the County of New York at Hosack Hall, Fifth Avenue and 103d Street.

Dr. Ewing declared that the creation of a bureau would contribute greatly to eliminating false and inadequate cancer diagnosis and help in the cure of the disease by enabling the physician to determine more clearly and with greater accuracy the particular kind of treatment required in any specific case.

Asserting that 22 per cent. of cancer cases in this and other cities remain unrecognized until after the victims' deaths and that in 10 per cent. of the cases the diagnosis has been shown to have been wrong, Dr. Ewing urged that no diagnosis be pronounced final or a form of treatment pursued until the original diagnosis has been confirmed by specialists working under the authority of the bureau of cancer. Until this is followed, he declared, "we shall continue to see many unnecessary and fatal operations and much needless suffering."

"No cancer diagnosis should ever be made or acted upon unless confirmed clinically and pathologically," Dr. Ewing said. "It may be maintained without fear of contradiction that a fairly competent capacity to recognize a tumor under a microscope is a life-long job."

# Case Records
of the
# Massachusetts General Hospital

ANTE-MORTEM AND POST-MORTEM RECORDS AS USED IN WEEKLY CLINICO-PATHOLOGICAL EXERCISES

EDITED BY R. C. CABOT, M.D.

F. M. PAINTER, A.B., ASSISTANT EDITOR

## CASE 16011

## MULTIPLE PERIPHERAL VENOUS THROMBOSIS

MEDICAL DEPARTMENT

A married Polish woman forty-one years old entered June 15 for study, semicomatose. The history was given by her sister, who spoke little English and had not been with the patient much during the present illness.

Five weeks before admission she had sudden severe stabbing pain in the middle lateral portion of the left leg, making her sit down for a minute or two. The leg soon became red and blue and moderately sore. The condition traveled up to the groin, where a large tender lump formed. She had sensations of needles and pins in the left leg. No other part was affected. She continued to work, though she felt some malaise. The sister did not know about fever. The left leg was much swollen for a week. Apparently there were visible veins on the left side of the abdomen. Gradually the swelling went down and the lump in the groin disappeared. Two weeks before admission the patient had pain in the left upper arm, whether sudden or not was unknown. Within two hours the hand and arm had become swollen and blue, with numbness and pins and needles sensation. Since that time she had been in bed, feeling much worse. Veins soon appeared over the left shoulder and the precordia and still remained. During the two weeks a physician gave her five injections, the last five days ago. She had been alternately hot and cold, sometimes shivering (no real chill), at other times sweating profusely. She had complained at times of quite severe pains in the lower abdomen, the left axilla, not related to respiration, somewhat relieved by pressure, and pain in the lower back relieved by nothing but hot irons. During the two weeks she had taken nothing but water and orange juice. A menstrual period began twelve days before admission and continued with fairly profuse flow until the day before admission. She had lost considerable weight. She complained at times of pain and discomfort in the left anterior thorax, and at such times seemed to have slight difficulty in getting her breath. During the past five days the discoloration and swelling of the arm had disappeared. During the past two days she had become increasingly unresponsive. Her bowels had not moved for a week.

Her family history is not significant.

She had always been strong and healthy, though obese. Her sister knew of only two illnesses. Eleven years before admission, three days after the birth of a child, the patient got up and began to work. She was seized with sudden severe abdominal pain which required a hypodermic for relief and lasted about two hours. The next day she was entirely well. She had had several similar attacks at intervals of one to two years. Three years before admission she was kicked in the left ankle, which swelled and was sore for about two weeks, with entire recovery. Her last pregnancy, three years before admission, resulted in a stillbirth at term.

Clinical examination showed a well nourished woman, semicomatose, giving an occasional drowsy groan and now and then waving her left arm slowly. Head, throat, heart, lungs and abdomen normal. Over the upper left chest and shoulder anteriorly the veins were more prominent than elsewhere. In the left supraclavicular space there was an indurated area extending laterally along the floor of the space. The left arm was redder than the right and showed numerous telangiectases on the forearm. The skin of the left foot showed some desquamation. The leg was redder than the right. Both legs showed many varicose veins. There was a small black papule on the left leg. Pupils normal. Knee jerks slightly hyperactive.

Amount of urine not recorded. Both of two catheter specimens showed a slight to a large trace of albumin and occasional leukocytes, one to two red blood cells per field once, acetone and diacetic acid positive once, specific gravity 1.026 to 1.035. Blood: 18,000 to 22,500 leukocytes, 80 to 84 per cent polynuclears, hemoglobin 70 per cent, reds 3,600,000. Two smears showed no achromia, anisocytosis or poikilocytosis, platelets normal. Four atypical cells seen, almost certainly myelocytes; two definite blasts seen. Hinton negative. Blood culture; no growth. Non-protein nitrogen 38 milligrams.

Until June 18 temperature 100° to 101.5°, pulse 100 to 120, respirations normal; a terminal rise to 106.1°, pulse 150, respirations 51.

A consulting neurologist could not explain the semicoma. He found the fundi and reflexes negative. No Kernig or Babinski. He recommended a lumbar puncture. It was done and was negative.

The patient remained in the same condition as at admission. The night of June 17 she was said to have had a convulsion followed by coma which was still present the next morning with no other physical signs than the rise in temperature, pulse and respirations and a marked increase in swelling around the left supraclavicular space with heat and a yellow tint as of subcutaneous hemorrhage. There was also a large swelling in the right supraclavicular space,

thought to be a lymph gland. June 19 her condition became steadily worse and she died.

### CLINICAL DISCUSSION

BY RICHARD C. CABOT, M.D.

### NOTES ON THE HISTORY

The severe stabbing leg pain is evidence of embolus, whether arterial or venous we cannot yet decide.

She continued to work, so I suppose it was venous.

Presumably the injections given by her physician were morphia.

She had pain in the left anterior thorax, on the same side on which she had something in the arm.

The fact that the swelling in the arm disappeared, as did the swelling in the leg, is support to the idea of venous thrombosis.

If her illness eleven years before admission was not gall stone I do not know what is was.

On the basis of the history we certainly must believe that she has had multiple thrombi. It is much more natural to think she had first embolism, later thrombosis, in the leg, then in the arm, and very possibly something in the lung. This makes us look for a source of emboli.

### NOTES ON THE PHYSICAL EXAMINATION

I do not think we need pay any attention to that acetone and diacetic acid. We assume that there is no sugar in the urine. She may have been vomiting. If it is not due to that, she was so nearly unconscious that she has not taken much food and therefore has starvation, the usual cause of that finding.

Unless the definition of myelocytes is given it does not help me at all; different people attach that name to many different cells.

I am relieved that the consulting neurologist could not find the cause of the semicoma.

Dr. Mallory, could you feel anything in the right supraclavicular space when she came down to you?

DR. TRACY B. MALLORY: Yes.

### DIFFERENTIAL DIAGNOSIS

DR. CABOT: I feel so far very uncertain as to the diagnosis. I feel quite clear that she has venous thrombosis first in the left leg and then in the left arm.

DR. MALLORY: It is fair to say that there were large lymph nodes in the left groin.

DR. CABOT: That is important. We have, then, large lymph nodes in the left groin as well as this one in the supraclavicular space; with evidence of multiple venous thrombosis and coma.

A STUDENT: Would you consider diabetic coma?

DR. CABOT: I do not see why we should. We have nothing in the history to suggest diabetes.

A STUDENT: The urine showed high gravity.

DR. CABOT: 1.035 is rather high; 1.026 is not high. We have a condition which naturally explains a concentrated urine.

A STUDENT: Why had she been on a diet of orange juice? What were the injections?

DR. CABOT: You think the injections were insulin? It is true she was obese.

A STUDENT: She had a stillbirth.

DR. CABOT: That certainly happens to so many people in so many conditions that I think it helps us neither toward nor away from diabetes. I should say it is very queer to have a person die in diabetic coma with no more history of increased appetite, thirst or albuminuria and with a negative urine. During two weeks five injections were given. That is a queer way to give insulin. I am going to vote against diabetic coma. But that was a very ingenious suggestion. I never should have thought of it myself, but I admire the brain of the man who did.

A STUDENT: Could acidosis itself be responsible for coma?

DR. CABOT: I do not think we have enough evidence of a decided acidosis,—no air hunger, which we ought to get with any severe acidosis. I think we ought to assume a brain lesion. Let us discuss what may have been found in the brain. In the first place whatever blocked the circulation in the extremities may have blocked a vein in the cerebral system, a sinus for instance. I do not see why sinus thrombosis might not produce this cerebral condition. I have seen cerebral thrombosis without any localizing symptoms. If the edema of the brain was general it might account for the coma. Second, we have these enlarged lymph glands, which worry me a good deal. Whatever those are may conceivably be in the brain, too. What could they be? Could she have the lymphoid form of leukemia? I think not. Even if you agree that those are myelocytes, four myelocytes do not make a leukemia any more than one swallow makes a summer. If we take the red count seriously she has anemia; patients do not have red counts like that without some explanation. There is however the difficulty that she has no achromia, which is almost always present in any of the common types of secondary anemia. I cannot therefore connect her anemia with the enlarged lymph glands, if they are enlarged lymph glands, and I do not see how we can say it is leukemia.

A STUDENT: How about aleukemic leukemia?

DR. CABOT: Let us call it lymphoblastoma without circulating metastases. What evidence have we of it? We have those four myelocytes, whatever weight we put on those, and more important, the presence of a definite anemia and possibly of enlarged glands. I do not remember seeing glands of this sort associated with such a blood as this in any type of blood disease that I know. I do not see how a diagnosis of any blood disease could be made on the basis of these

facts alone. I do not know what those lymph glands are. They might perfectly well be neoplastic lesions of some type not connected with the hematopoietic system; but I do not know where to put any such neoplasm. One that would bring about thrombosis in the left arm and left leg with a gland in the right axilla is a hard one for me to think of. Hypernephroma is a tumor as often missed as any tumor we have. I do not remember seeing it going with any such metastases, if they are metastases, as this. We look for bone metastases in hypernephroma. Where else in the body could neoplasm be relegated? The tail of the pancreas? I remember they caught me with that twice at the Brigham Hospital, no one having suspected it. The lung? Perfectly possible so far as I know. We had proof of it last week. We had no X-ray in this case. I do not know just why not.

DR. HOLMES: She was probably too sick. Would you consider infection of some unusual kind? There was a black papule on the left leg.

DR. CABOT: I cannot name it. That black papule may be a very sinister sign, but I do not know what to call it.

A STUDENT: If this is not a blood disease how do you account for the leukocytosis?

DR. CABOT: Leukocytosis does not occur in any blood disease that I know.

A STUDENT: Wouldn't it have to mean infection?

DR. CABOT: The causes of leukocytosis are legion, as you know, outside of infection. It is true infection is the commonest cause of leukocytosis, and infections often go with venous thrombosis, which she had had.

A STUDENT: The terminal rises of temperature, pulse and respirations are all significant of infection, aren't they?

DR. CABOT: I should not say so. Terminal rises occur near death from any cause. I should not suppose that points to infection. But it certainly would not point against it.

A STUDENT: Couldn't she have a brain abscess?

DR. CABOT: I do not know how to diagnose brain abscess without focal, that is, localizing brain symptoms. It can occur, but I do not see how we can diagnose it.

A STUDENT: Could it be a pylephlebitis? The acute abdominal attacks over several years might have been liver pain and a septic condition.

DR. CABOT: I do not know how you can make that diagnosis without ascites or other localizing symptoms. Pylephlebitis involves the portal vein and that results in ascites. It is a hard diagnosis to make unless you have a previous disease of the type often associated with it, e.g., appendicitis, dysentery, diverticulitis, none of which we have here.

A STUDENT: Could general septicemia explain the thrombosis and the enlarged lymph glands?

DR. CABOT: I should not say so. General septicemia has not produced lymph glands of this type as I have seen it unless there was a local lesion in that vicinity draining into the lymph gland.

A STUDENT: What is the significance of the profuse menstrual flow?

DR. CABOT: I do not know. Disturbances of menstruation, either profuse or diminished flow, are common in any serious illness in women.

A STUDENT: Is thrombosis sometimes due to mechanical pressure of enlarged glands?

DR. CABOT: Yes. That is a good suggestion, especially about this leg, because that is the side on which we had a big gland. I think that is the best suggestion we have had. We have some enlarged glands, with thromboses. Still we want to know what the glands were. Could we say that these are the glands of Hodgkin's disease, of the primary type of lymphoma? I do not know why not. That seems to me a good idea. I had not thought of it at all. It could go perfectly well with this blood picture, and such thrombosis could be connected with such enlarged glands.

A STUDENT: Would you expect that on one side of the body?

DR. CABOT: No, but I do not think that is enough to throw out the diagnosis.

A STUDENT: What was the cause of the yellow tint over the swelling around the left supraclavicular space thought to be a lymph gland?

DR. CABOT: I do not know what to make of that yellow tint. I have never seen hemorrhage in that spot. I do not know what it means.

A STUDENT: She has some signs in the thorax, general discomfort and difficulty in getting her breath.

DR. CABOT: I do not think that supports the idea of Hodgkin's disease, but it does not go against it.

A STUDENT: Would you consider pulmonary embolus there?

DR. CABOT: I cannot negative it, but I should have to suppose a pretty small one. The symptoms are not nearly so acute as we usually get in pulmonary embolism.

I have a sort of feeling it is not Hodgkin's disease, but that is the best suggestion made yet.

A STUDENT: Wouldn't you expect the characteristic eosinophilia in Hodgkin's disease?

DR. CABOT: There is no such thing as characteristic eosinophilia in Hodgkin's. I believe I have examined as many cases as anyone, and I have not found that it is at all characteristic. It does occur of course, but I do not believe it is more than one case in ten.

### CLINICAL DIAGNOSES (FROM HOSPITAL RECORD)

Multiple thrombophlebitis with septicemia.
Pneumonia.

### DR. RICHARD C. CABOT'S DIAGNOSIS

Hodgkin's disease with thrombosis.

ANATOMIC DIAGNOSES

1. *Primary disease.*

Lymphoblastoma, Hodgkin's type.

2. *Secondary or terminal lesions.*

Migrating thrombophlebitis, peripheral and cerebral.
Multiple miliary softenings of the brain.

PATHOLOGIC DISCUSSION

BY TRACY B. MALLORY, M.D

This case was one primarily of Hodgkin's disease. I think the unusual manifestations of the phlebitis and the coma rather distracted attention from a good many details which ordinarily might have commanded it. There was a huge mass of tumor tissue which measured 5 by 6 by 7 centimeters approximately in the position of the thymus in the anterior mediastinum. That should certainly have given evidence on percussion of the chest, certainly would have shown if an X-ray of the chest had been taken. There was pretty general lymph node enlargement, most marked in the left groin and in the retroperitoneal glands. The veins of the right leg and left arm showed fresh thromboses which I think were infectious in origin. Possibly pressure had something to do with them, too. The brain lesions we have not had time to study thoroughly yet. There were many very minute miliary areas of softening which in sections showed edema and absorption of myelin but no leukocytic reaction, and in the sections there seemed to be thrombi in a few of the smaller vessels. It probably represents another focus of the migrating phlebitis which she had elsewhere. It is a very unusual picture. I have never seen anything like it, and I do not know yet exactly what it is.

DR. CABOT: Was there anything in the lungs?

DR. MALLORY: Nothing was found in the lungs.

DR. CABOT: Was that yellowing in the supraclavicular space accounted for?

DR. MALLORY: We did not notice anything at autopsy.

DR. HOLMES: Isn't thrombosis a very unusual occurrence in Hodgkin's disease?

DR. MALLORY: It is relatively rare.

DR. HOLMES: I do not remember seeing a case of thrombosis in Hodgkin's disease.

DR. CABOT: Dr. Holmes sees many cases of Hodgkin's disease in the X-ray Department and does not remember seeing any case with thrombosis. That comforts me that I did not think of it until a member of the class suggested it.

## CASE 16012

## BLOW ON ABDOMEN. QUESTION OF "INTERNAL INJURIES"

SURGICAL DEPARTMENT

A Polish truckman thirty-five years old entered the Emergency Ward November 22.

About an hour before admission while handling railway ties he was struck a severe crushing blow in the abdomen by the fender of a truck. He was apparently not knocked unconscious, but had lain in a semistuporous condition. The shock of the blow had been sufficient to make his memory and story of the accident very vague. He had vomited clear watery fluid three or four times.

Clinical examination showed an exceptionally well developed and nourished Pole lying in bed obviously moving as little as possible, sweating slightly and occasionally vomiting clear watery fluid. The extremities were cold. The general physical examination was otherwise essentially negative. The abdomen was not discolored or abraded but showed extreme spasm and tenderness and board-like rigidity throughout. The tenderness was perhaps most marked over the left rectus.

Operation was done the night of admission.

DISCUSSION

BY TORR WAGNER HARMER, M.D.

Our patient was a powerfully built man who about two hours previously had sustained a forcible blow, probably a crushing blow, on his abdomen. Vomiting had ensued. The vomitus was not bloody. The abdomen showed no mark of the blow, but it was of board-like rigidity throughout, perhaps most marked over the left rectus. There were four significant signs which the record does not state. First, the urine showed no blood. Second, rectal examination was apparently negative. Third, with the man on his back there was dullness in both flanks and tympany in a central area. Fourth, liver dullness seemed diminished. The general board-like spasm more marked over the left rectus was consistent with severe contusion of the abdominal musculature, especially the left rectus, but other signs pointed to intra-abdominal injury. The spasm then denoted peritoneal irritation. It might be from ruptured bowel or liver or spleen. There was no pain on pressure over the lower ribs, anteriorly, posteriorly or laterally. Our attention was more attracted to the left side and so suggested rather injury to the bowel or spleen. The dull flanks and tympanitic center suggested fluid, probably blood. It was not deemed prudent to turn the patient from side to side to observe any change in dullness for fear of spreading contamination if the bowel were ruptured. Free blood in considerable quantity seemed likely. Rupture of the spleen might be present. If so, this amount of hemorrhage after two hours denoted a wide

rent of the splenic capsule; for it is known that intra-abdominal hemorrhage from injury to the spleen may not be manifest for many hours if the capsule is not at once severed, that is not until the intracapsular hemorrhage has burst through a weakened area in the capsule. Rupture of the mesentery with hemorrhage from intestinal vessels was also a possible explanation. The apparent diminution in liver dullness suggested free intra-abdominal gas. Ruptured bowel seemed likely and immediate operation was done with this diagnosis. Hemorrhage from ruptured mesentery or spleen could not be excluded.

PRE-OPERATIVE DIAGNOSIS

Traumatic rupture of the bowel.

OPERATION

Ether. The abdomen was opened through an eight-inch left rectus incision. The rectus muscle was found completely severed just below the level of the umbilicus, apparently from a crushing blow with absence of hemorrhage. The peritoneum was opened with the escape of blood. An ischemic section of bowel about seven inches long was readily found and turned out of the abdomen on a moist towel. The whole left side of the abdomen was filled with blood, which was bailed out, and a ruptured loop of intestine was found in the left flank. The hole was about the size of the end of a thumb, of "blow-out" type, with mucous membrane everted. This was closed with a double layer of number O continuous catgut sutures. Further exploration failed to reveal any other trouble. The spleen was intact. A ten-inch portion of bowel was then resected and an end-to-end anastomosis completed with two layers of number O continuous catgut. The omentum, which had been torn nearly from top to bottom, existed as a ring through which small bowel protruded. The omentum was repaired by interrupted sutures of catgut and small tabs of it were caught over the repaired bowel at the anastomosis. The abdomen was closed in layers without drainage, in view of the fact that the operation was undertaken about two hours after the accident and also that the injured bowel was apparently the jejunum.

PATHOLOGIC REPORT

A section of intestine 22 centimeters long with a purplish red surface. Its walls and mucosa are necrotic.

Infarction.

FURTHER HISTORY

The patient made a very good recovery from anesthesia and an excellent convalescence. A small hematoma developed at the upper end of the wound at the site of the ruptured rectus muscle. The wound drained serum but was not infected. December 9 he was up in a chair. December 17 the wound was practically closed, with almost no drainage. There was a very small superficial sinus. December 18 the patient was discharged.

LATER NOTE

April 17, five months later, the patient reported for examination. He seemed well in every way except for some indefinite pain at times. The incision was solid.

FURTHER DISCUSSION

Much free blood was present upon opening the abdomen. The picture was striking. The omentum showed a long vertical rent. There was a little bleeding from the torn edges. Most of the vessels were already sealed. Through the rent small bowel presented. A section of ischemic small bowel lay beneath the left part of the omentum. Its mesentery was severed transversely near the gut. The torn ends of the little arteries were sealed and pulsated as little knobs. The left flank was filled with blood. A "blow-out" perforation of the small bowel in the left upper quadrant was found and at once repaired. No other perforation was found and the spleen was seen to be intact. The resection of the bowel, the end-to-end anastomosis and the repair of the omentum are described above.

It is noted that the abdomen was closed without drainage and the reasons are given that only two hours had elapsed since operation and that the injured bowel was the jejunum. It is well known that the contents of the ileum, cecum and large bowel are highly infective. It is also well known that the contents of the jejunum are relatively non-infective. Therefore, after only two hours if the damaged bowel could be definitely identified as jejunum, even despite a blow-out perforation and an end-to-end anastomosis it was safe to close without drainage. Blood is a well known culture medium. The whole area was moistened with blood. Even so, if the damaged bowel were jejunum, it was safer to close the abdomen without drainage rather than invite infection from without through drainage. The decision rested upon the identification of the portion of the small bowel which was damaged.

We know that the upper jejunum as compared with the lower ileum is somewhat wider, that it is more colored due to its greater vascularity, that it is thicker due to the presence of valvulae conniventes. We also know, however, that these criteria are unreliable in differentiating the lower jejunum and the upper ileum. Again the jejunum comprises the proximal two-fifths of the small bowel and the ileum the distal three-fifths; but the studies made by Treves demonstrated that, although the average length of the small bowel is about 22 feet, it may vary between 15 feet 10 inches to 31 feet regardless of age, sex, height, or weight. Monks[1] has made very valuable contributions to the identification of the parts of the small bowel. Briefly

stated, he showed that arrangement of the vessels in the mesentery is quite characteristic. In the upper jejunum he found that the vessels ran to the bowel leaving well defined translucent areas along the bowel margin which he called lunettes. As the terminal ileum is approached the arrangement of the vessels changes. There appear secondary and even tertiary loops, the vessels from them to the bowel become shorter and less defined and the lunettes disappear. He furthermore demonstrated that the surface of the abdomen could be marked off in three areas and that roughly these areas contained the proximal, middle, and distal thirds of the small intestine. His surface marking is in brief as follows. The root of the mesentery runs from the left side of the second lumbar vertebra to the right sacroiliac articulation. If a line be projected on the surface of the abdomen to indicate the mesenteric root and if lines be drawn at right angles to the upper and lower ends of this projected line, the abdomen will be divided into an upper left area, a lower right area and a central area. The upper left area will be found to contain roughly the upper third of the small bowel, the central area the middle third and the lower area the lower third. The jejunum is 2/5 (5/15) of the small bowel and the ileum is 3/5 (9/15). We would find roughly 5/15 of the small bowel in the left upper area, or practically all of the jejunum. In this case under discussion the injured bowel lay in this area. The justification for not draining is borne out by the uneventful convalescence and recovery.

[1]Monks, G. H. Trans. Am. Surg. Assoc., 1903, XXI:405-423.

DIAGNOSES

Traumatic rupture of bowel.
Tear of mesentery and omentum.
Rupture of left rectus muscle.

## THE SUPPLY OF PHYSICIANS IN MAINE

BY CLARENCE F. KENDALL, M.D.
*Commissioner of Health, State of Maine*

Doctors for Maine towns which are now without medical aid, and more young doctors in other parts of the State are one of the greatest needs of Maine.

The only medical school in the State, the one maintained by Bowdoin College, was discontinued in 1923, and since that time young men who wish to study medicine must go outside of Maine. After they have completed their training they do not return.

A recent survey made by the State health department shows that there are at the present time 873 physicians carrying on private practice in this State. This does not include 58 doctors who are working in hospitals and various institutions, summer residents or those retired from active practice.

Taking the State as a whole, with an approximate population of 790,000, there is an average of one physician to every 916 citizens. In 226 of the smaller towns there are no resident doctors, and in addition 65 organized plantations are without M.D.'s. Only 154 of the small towns have resident doctors and the total number of doctors in all the rural districts is only 230.

The nine largest cities and towns, with population of 10,000 or more, have 335 resident physicians; 24 towns of from 4,000 to 10,000 inhabitants have 181 doctors; 39 towns of from 2,000 to 4,000 have 127 doctors; and 154 towns of less than 2,000 have 230 doctors.

A study of the ages of these physicians shows 9 between 20 and 30; 107 between 30 and 40; 203 between 40 and 50; 267 between 50 and 60; 181 between 60 and 70; 79 between 70 and 80; 13 over 80; and 14 whose ages are unknown.

Thus it appears that by far the largest group of our physicians is in the 50-60 class. There are only 319 doctors under 50 as contrasted with 554 who are over 50. In other words, 61.9 per cent. of our doctors in Maine are over 50 years of age, and the younger ones are not coming on to take their places

The rural communities are the ones that are most in need of medical services. Several of the 226 towns and 65 organized plantations which have no resident doctors, appropriate money at their annual meetings for a doctor's salary, and offer bonuses ranging from $500 to $3,500 in order to induce physicians to settle.

In the towns under 2,000 population which do have physicians, only 75 of them are under 50 years of age, while 155 are more than 50.—*The U. S. Daily.*

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## INVASION OF THE MENINGES AND THE BRAIN BY INFECTIONS PASSING UPWARDS FROM THE NASAL CAVITY

THERE are a number of diseases which we have long considered as having a possible entrance into the central nervous system from the nasal cavity through the olfactory plate. This mode of entrance is probable in epidemic meningitis, possibly in other forms of meningitis, encephalitis lethargica, brain abscess, and poliomyelitis.

The demonstration of the anatomical pathway by the experimental method, however, has never been completely satisfactory. There has always been considerable doubt expressed as to whether the experimental work, for instance, of Key and Retzius (1875) would stand the test of time. They injected dyes into the subarachnoid space of dead animals, usually dogs or rabbits, and were able "to persuade" the material to pass through the cribriform plate into the olfactory mucosa. A fine anastomosing network filled with the dye extended throughout the nasal mucous membrane and into the frontal area sinuses; the plexus, in their opinion, was a true lymphatic plexus continuous with the channels going to the lymph glands of the neck. Their conclusions may have been correct, but we have better evidence now for an opinion that the material may pass in the opposite direction along a similar, but not the same, pathway. Key and Retzius experimented on dead material, which possibly led to fallacious conclusions. They also injected their fluids under irregular pressure and only demonstrated that material could pass from the intracranial cavity down into the nasal cavity, bringing no satisfactory evidence that such was the normal condition during life, or, more important, that the injections could pass upwards.

The newer methods of investigation of the central nervous system, stimulated largely by the use of potassium ferrocyanide and iron ammonium citrate, a reagent devised by Weed, have thrown considerable light upon this problem and the conclusions reached by Professor le Gros Clark* may have a practical value from the clinical point of view. Using Weed's solution, he injected material into the nasal cavity of live animals; examination of the brains histologically within a few hours demonstrated clearly that the granules of Prussian blue passed upwards by way of the *perineural sheaths of the olfactory nerves* and reached the surface of the brain within one hour. He produces evidence to show that the perineural sheaths of the olfactory nerves are continuous above with the subarachnoid space and extend peripherally along the fibres of the olfactory nerves to the olfactory sensory epithelium. He also postulates the existence of a current passing upward from the nasal mucous membrane. Evidence was found, moreover, to support the idea that material might pass upwards by other pathways than by the perineural sheaths of the olfactory nerves, by way, for instance, of the blood vessels piercing the cribriform plate in company with the olfactory nerves and by direct propagation along the protoplasmic axis cylinders of the nerve supplying the peripheral infected areas. He found no evidence to support the old proposition of Key and Retzius that the subarachnoid space was in direct communication with the lymphatic vessels of the nasal mucous membrane.

This important piece of research again calls attention to pathways of infection into the central nervous system. If material passes readily along the channels indicated, we must accept this as a possible way for epidemic meningitis and other diseases to enter into the subarachnoid space. More attention should, therefore, on the basis of le Gros Clark's findings, be directed in the early days of these diseases to attempted sterilization of the nasal mucous membranes.

*Clark, W. E. le Gros. Report to the Committee on Vaccination on an Anatomical Investigation into the Routes by which Infections may pass from the Nasal Cavities into the Brain. Reports on Public Health and Medical Subjects, No. 54. London: His Majesty's Stationery Office, 1929, pp. 27 (illus.).

## CANCER PARASITES AGAIN

THE striking discoveries of Pasteur and our experience in the control of the infectious diseases, based on knowledge of the specific organisms involved, have cast a peculiar glamour over the parasitic theory. This has led to many indictments of one or another organism as the cause of cancer, only subsequently to be proved innocent. Statistics always make an interesting toy and if handled properly almost any hypothesis can be proved.

It is possible that this present revival of the parasitic theory falls in the same class as the others. If the Transcript correctly quotes the author, Dr. Louis Sambon writes in the *British Medical Journal* that he believes "cancer is caused by the activity of a most minute endocellular parasite strictly adapted to its specific cell host. The specific germ appears to be universally prevalent and of wide zoölogical distribution." The report is also said to emphasize that "certain villages in Westmoreland County are totally free from cancer while others suffer heavily. This variation is true even of streets and single houses in the same community." The prevalence of cancer in animals is emphasized and the animal sources apparently considered as an important element in the development of the disease. The reference to cancer villages and cancer streets is reminiscent of work of Park[1], Mason[2] and others, now of historical interest only.

It is discouraging that ghosts once laid will walk again, but until the etiology of cancer is definitely proved we must be constantly prepared for the careful analysis of various hypotheses, old and new. One hopeful thing this Transcript dispatch emphasizes: that the interest in cancer is so general, so widespread that a presumably technical report in a medical journal is considered as front page news.

REFERENCES

1 Park: British Medical Journal, 1:812, 1899.
2 Mason: British Medical Journal, 1:139, 1902.

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## THE CAMPAIGN FOR FUNDS FOR THE BOSTON MEDICAL LIBRARY AND THE MASSACHUSETTS MEDICAL SOCIETY IS HANDICAPPED BY CONFUSION OF TERMS

THE committee in charge of this drive will resume its functions during the early part of January 1930. Active work was suspended during the financial depression of last November because many persons who may reasonably be expected to be interested in this movement were obliged to concentrate their activities along other lines.

It is believed by many influential persons that there is no reason for further postponement of the Campaign.

Physicians and others should keep clearly in mind, that the public announcement of a plan for a clinical medical center does not have any direct relation to the plan for putting the Medical Library into shape for meeting the need for adequate accommodations for its very valuable possessions.

In the early stages of this Campaign it was clearly shown that the Boston Medical Library would become a medical center in an educational sense in that it would concentrate medical and allied interests in public health activities as far as possible through facilities for meetings and office space. The use of the term "Medical Center" was very general in the announcements and the later employment of this term by the more recent organization has made confusion in the minds of some with whom the later scheme has been discussed.

It is unfortunate that any misunderstanding exists and it is reasonable to expect that the organizers of the combination of the Boston Dispensary, The Boston Floating Hospital and the Trustees of Tufts College will employ measures to have the confusion corrected if it is found to exist in any appreciable degree.

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## THIS WEEK'S ISSUE

CONTAINS articles by the following named authors:

GRAVES, WILLIAM P. A.B., M.D. Harvard 1899. F.A.C.S. Surgeon-in-Chief, Free Hospital for Women. Professor of Gynecology, Harvard Medical School. He writes on: "Early Diagnosis and Prophylaxis in Female Genital Cancer." Page 1. Address: 198 Commonwealth Avenue, Boston.

PHANEUF, LOUIS E. Phm.D., Ph.C., M.D. Tufts College Medical School, 1913. F.A.C.S. Professor of Gynecology, Tufts College Medical School. Chief of Service, Department of Gynecology and Obstetrics, Carney Hospital. Consulting Gynecologist, Beth Israel Hospital, Leonard Morse Hospital, Natick, Mass. and Henrietta D. Goodall Hospital, Sanford, Me. Consulting Gynecologist and Obstetrician, Fall River General Hospital, Fall River, Mass. He writes on: "Cancer of the Female Genital Tract." Page 8. Address: 270 Commonwealth Avenue, Boston.

MEIGS, JOE V. A.B., M.D. Harvard 1919. F.A.C.S. Surgeon to Out-Patient Department, Massachusetts General Hospital and Palmer Memorial Hospital. Assistant Surgeon to Outpatient Department, Collis P. Huntington Memorial Hospital. Surgeon, Pondville Hospital at Norfolk and Vincent Memorial Hospital, Jamaica Plain. Non-resident Consulting Surgeon, Burbank Hospital, Fitchburg. He writes on: "Carcinoma of the Female Genital Tract." Page 9. Address: 264 Beacon Street, Boston.

LEWIS, DEAN. B.A., D.Sc., LL.D., D.S.M., M.D. Rush Medical College 1899. F.A.C.S. Professor of Surgery, Johns Hopkins Medical School. Surgeon-in-Chief, Johns Hopkins Hospital. He writes on: "Tumors of Bone." Page 11. Address: Johns Hopkins Hospital, Baltimore, Maryland.

COBB, JOSEPH J. M.D. Bowdoin Medical School 1881. President, New Hampshire Medical Society 1928-1929. Chairman, Committee of Medical Education of the New Hampshire Medical Society. He writes on: "Education of the Specialist." Page 21. Address: 53 High Street, Berlin, N. H.

RICKER, WILLIAM G. A.B., M.D. Johns Hopkins University 1904. Secretary, Vermont State Medical Society. Member, Vermont State Board of Health. He writes on: "The Needs and Opportunities of Specialists." Page 22. Address: St. Johnsbury, Vermont.

## THE DOCTOR'S SADDLE BAG

### THE NEW YEAR RESOLUTION

THE New Year Resolution, like the bath, is good for us even if its immediate effects are not lasting. They are similar in that they are both cleansing and that they both need repetition; their only differences, really, lie in the fact that one cleanses the soul and the other the body, and that one must of necessity be repeated in the winter time (since the New Year so falls) and the other, from the point of view of convenience, and accepting the old farmer's maxim, in the summer time. There are those effete formers of civilized custom who believe that the bath should be repeated more frequently; even daily—others maintain that it is weakening and in a sense it does destroy a certain sort of strength——

Perhaps a movement may be instituted or set on foot to take away from the New Year the glory of being the only occasion on which resolutions may be made. They might easily become a quarterly institution like mortgage interest or bank dividends, or monthly, like the dissemination of bills. For those who are really addicted to resolution making, fifty-two times a year might not be too often, and I should suggest Saturdays or Sundays for this sort of setting up exercise—Monday, although it starts the business week, is a bad day. Real enthusiasts might prefer a daily schedule and they could synchronize their resolutions with watch-winding, tooth-brushing or shaving, but on the whole this should meet with just disfavor. A resolution which cannot last a day is a poor sort of an inspiration and hardly worth bothering with.

New Year's resolutions have always received a considerable amount of ridicule and have been made the butt of many a jester's satire, not because they are formed, but because they are broken. The breaking of resolutions should not be a subject for pseudo-wit and hare-brained humor, but of sadness. The making of resolutions exemplifies the sanguine spirit of mankind; it is an evidence of good faith and a desire to do better. The breaking of them is the old example of human frailty. I do not find it in my heart to seek a cause for inelegant mirth in a broken resolution any more than I can find occasion to burst into peals of merriment at any human failure to achieve the heights which a clear vision had placed before one. Rather do I find it a cause for congratulation and a justification of my faith in man that he should aspire to higher thoughts and improved actions.

The trouble is that we have, or think we have, so little time to think clearly. We live our daily lives with watch in hand. We hurry from one appointment to another, striving to achieve the obvious, shaping our courses towards material goals and wearing ourselves out in an endless bother of inconsequential nothingnesses. It is only when the picture is cut off from the screen that we find ourselves in darkness. We had been looking at a succession of lights and shadows when nothing was really there.

Some change is often necessary in our inward or outward environment to make us realize how petty were our efforts and how little we know ourselves. Often this is a gradual change; a growing dissatisfaction with our daily lives and an increasing resentment at the course we are following. If we are of proper fibre we rise to the occasion and seek and find some outlet for our thwarted spiritual ambitions. If we are overweak we succumb to unhappiness but build up impregnable defenses against the truth. We look at ourselves only with our eyes shut and develop an uncomfortable neurosis with which to make ourselves comfortable.

Sometimes a sudden break, often calamitous in its first shape and appearance will cut the Gordian knot for us. A sudden and prolonged illness will lift us out of the rut whose sides we could not see over and set us down in a peaceful valley while the work we thought we could not leave goes on without us. Hawthorne, when he lost his job in the customs house in Salem, came home discouraged. His wife put pen and paper before him and he wrote the Marble Faun, and the customs house saw him no more.

I have just read a little editorial entitled "A Few Days in Bed", telling of the dismay with which a New York lawyer went to the hospital for an operation. While there, with his mind free and no daily duties to perform, his problems solved themselves. The writer of this editorial quotes Disraeli who said to his wife "I think that this is the moment to imitate Talleyrand, who, when he could not see very clearly what ought to be done, took to his bed."

Let this be your resolution this year: find the time to know yourself; make leisure in which to entertain the thoughts you have been excluding from your busy life.

# MASSACHUSETTS LEGISLATIVE NOTES

On petition of Edward J. Kelley a bill, House No. 141, has been introduced which, if enacted, will provide for compensation from the day of injury under the provisions of an amendment to the Workmen's Compensation Law.

Another bill, House No. 140, tends to provide the maximum and minimum amount of compensation payable to injured employees under this amendment. The wording is as follows:

*Section 34.* While the incapacity for work resulting from the injury is total, the insurer shall pay the injured employee a weekly compensation equal to two thirds of his average weekly wages, but not more than twenty dollars nor less than ten dollars a week, except that the weekly compensation of the injured employee shall be equal to his average weekly wages in case such wages are less than nine dollars; and the period covered by such compensation shall not be greater than five hundred weeks nor the amount more than five thousand dollars.

SECTION 2. Section thirty-five of said chapter one hundred and fifty-two, as amended by section eight of said chapter three hundred and nine of the acts of nineteen hundred and twenty-seven, is hereby further amended by striking out, in the sixth line, the word "eighteen" and inserting in place thereof the word:—twenty,—and by striking out, in the eighth line, the words "forty-five hundred" and inserting in place thereof the words:—five thousand,—so as to read as follows:—*Section 35.* While the incapacity for work resulting from the injury is partial, the insurer shall pay the injured employee a weekly compensation equal to two thirds of the difference between his average weekly wages before the injury and the average weekly wages which he is able to earn thereafter, but not more than twenty dollars a week; and the amount of such compensation shall not be more than five thousand dollars.

Annie Dixon Brown petitions that the conduct of physicians be regulated with extension of the statute of limitations as per draft subjoined.

THE COMMONWEALTH OF MASSACHUSETTS

In the Year One Thousand Nine Hundred and Thirty.

An Act regulating the Conduct of Physicians and extending the Statute of Limitations relative to Actions against Physicians.

*Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:*

SECTION 1. A physician shall not remove any organ or limb of the body from a patient without first obtaining consent of such patient, if the patient is mentally and physically capable of giving such consent, otherwise the consent of the patient's nearest available relative or of the patient's parents or guardian; but if the patient is unconscious and no relative or guardian is within call, the physician may proceed upon his own judgment.

SECTION 2. After the removal of such organ or limb the physician shall explain to the patient and relatives that it is their right to view the part removed from the body and be given a full explanation alone or in the presence of any physicians they may choose as to the necessity of such removal.

SECTION 3. Actions of contract or tort for malpractice, negligence, error or mistake, against physicians, may be commenced at any time within ten years next after the cause of action accrues.

SECTION 4. A physician shall not handle or treat a patient in such a way as to cause pain to the patient without first explaining that pain will result from such handling or treatment and obtaining permission therefor from the patient, if an adult, or from the patient's parents or guardian, if a child. This clause shall not apply to treatment that the patient may have requested, such as osteopathic treatment or the proper testing of the heart, lungs and the like, or to cases where a patient might already be suffering anguish and the physician could by hand manipulation perform some absolutely necessary act, such as replacing a dislocation or setting a bone, but shall prohibit such acts as tearing by hand or instrument or cutting of the flesh or the insertion of instruments whereby the patient's rights as a free and sane individual are violated.

SECTION 5. A physician violating any provision of this act shall be punished by a fine of not less than fifty nor more than five hundred dollars, or by imprisonment for not more than one year, or by both such fine and imprisonment.

Mr. M. A. O'Brien, Jr., petitions for the placing of a tablet in the State House commemorating the military services of Major General Leonard Wood. (House No. 111.)

John R. Macomber and others petition for authority of the Boston Dispensary, the Boston Floating Hospital and the Trustees of Tufts College to form an alliance for the purpose of operating a medical center under the bill, House No. 80, reading as follows:

HOUSE NO. 80

THE COMMONWEALTH OF MASSACHUSETTS

Department of Corporations and Taxation,
State House, Boston, November 29, 1929.

*To the Honorable Senate and the House of Representatives.*

Under the provisions of section 7 of chapter 3 of the General Laws there is transmitted to you herewith a bill and petition to authorize the Boston Dispensary, the Boston Floating Hospital and Trustees of Tufts College to form an alliance for the purpose of operating in common a Medical Center.

This is a petition which in substance, if enacted, would authorize the three corporations to form an

alliance to carry on jointly a work which partakes of some of the purposes of each of the three corporations.

It is intended to operate jointly a medical center; that different parts of the operation will be carried on by the three entities engaged; and that the property acquired will be occupied by representatives of any or all of the three corporations as their portions of the work may require.

Two of the corporations were created by Special Acts, and one was organized under the General Laws. No attempt is here made to gain exemption of property not accorded to corporations engaged in similar work, but only to clarify a situation that may arise because of the joint activities provided for in the bill.

No fee is required.

Respectfully yours,

HENRY F. LONG,
*Commissioner of Corporations and Taxation.*

HOUSE—NO. 80

Accompanying the petition of John R. Macomber and others that the corporations known as Boston Dispensary, the Boston Floating Hospital and Trustees of Tufts College be authorized to form an alliance for the purpose of jointly operating a medical center. Public Health.

THE COMMONWEALTH OF MASSACHUSETTS

In the Year One Thousand Nine Hundred and Thirty.

An Act to authorize the Boston Dispensary, the Boston Floating Hospital and Trustees of Tufts College to form an Alliance for the Purpose of Operating in Common a Medical Center.

*Whereas*, The Boston Dispensary, the Boston Floating Hospital and the Trustees of Tufts College, three charitable corporations organized and existing under the laws of Massachusetts, desire to form an alliance for the more effective carrying out of their respective corporate purposes in connection with a medical center under the supervision of an administrative board composed of representatives from each of said corporations, and to render mutual services and operate one or more plants in common, and to contribute from their respective funds toward the cost of acquiring property to be used in connection with and maintaining and operating such medical center; now, therefore,

*Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:*

SECTION 1. Said Boston Dispensary, the Boston Floating Hospital and Trustees of Tufts College be and they hereby are authorized and empowered to enter into such mutual agreement or agreements and to take such other action for the accomplishment of the objects set forth in the preamble to this act and to acquire and hold, either separately or jointly, or as tenants in common, such real and personal property as they may respectively deem necessary or desirable for the accomplishment of said objects; provided, however, that none of said corporations shall exceed the limits imposed by law upon the amount of property which each may acquire; and said corporations respectively are further authorized and empowered to expend such of their funds, not restricted to other purposes, in the acquisition of such property and in the maintenance and operation thereof and for the other objects set forth in the preamble hereof as they may respectively deem necessary or desirable.

SECTION 2. Any real and personal property thus owned jointly or in common by said corporations, or any of them, provided it is used by them or any of them for any of the objects recited in the preamble hereto, shall be considered for the purposes of taxation as property of the kind described in paragraph third of section five of chapter fifty-nine of the General Laws.

## MISCELLANY

### TUBERCULOSIS ABSTRACTS

BULLETIN OF THE NATIONAL TUBERCULOSIS ASSOCIATION

Modern plans for curbing the spread of tuberculosis consist of a combination of medical and social measures, which aim (a) to prevent infection and (b) to inhibit the development of actual disease, once infection has taken place. The techniques employed for achieving these aims vary in actual practice according to the viewpoints of the several workers and the peculiar situations of their communities. W. Bolton Tomson, M.D., in a recent book, "Some Methods for the Prevention of Tuberculosis," describes several outstanding measures employed in European countries, which illustrate various emphases on details of method.

FRANCE

Professor Grancher realized the possibilities of separating the newborn from its tuberculous mother, and, as the result of his labor, the *Œuvre Grancher*, a society for protecting children against tuberculosis, was established in 1903 and received governmental endorsement two years later. It arranges "for children from three to ten years of age who are not infectious to be placed out in country districts, where they are educated and stay until they are thirteen years of age." Over 2,500 children have been cared for, and during a period of over 17 years only 7 cases of tuberculosis were registered. The average cost per child is about one-sixth the cost of healing a tuberculosis patient in a sanatorium.

Another society, the *Placement Familial des Tout-Petits*, deals with children from birth. The newborn baby is isolated temporarily in a *crèche*, or baby ward, for observation, then cared for at a Maternity Clinic for about three years, after which he is boarded out in a peasant family free from tuberculosis. Separation between mother and child is complete, excepting in rare instances where breast feeding seems essential. The mother is induced to give up her baby by kindly persuasion, but the surrender must be complete for a period of not less than two years. Parents may make four visits to the child during the year. The foster parents are supplied

with the infant's clothing, a cradle and a perambulator. They are bound by definite rules to care for the child as specified by the association and to bring the child periodically to the Centre for observation. The 1927 report of this society states that of the 434 children dealt with, there were 19 deaths, only one of which was due to tuberculosis.

BELGIUM

The Belgium National League against Tuberculosis operates on principles similar to those employed in France. It receives financial aid from the government,. municipalities, private donations, fetes, etc., and allots grants to its several branches on a per day, per child scale. Out of 3,000 children dealt with, only one has died from tuberculosis. As in France, many of the children placed in foster homes decide to remain in the locality of their adoption on reaching maturity.

SWITZERLAND

In Switzerland, the emphasis is on sanatoria and on preventoria. A federal subsidy helps to finance the plan of placing children in preventoria, and allotments are made to the institutions on a per child, per day basis. The results appear to be not so glowing as those reported from France and Belgium. For example, a study was made (terminating in 1923) of 323 patients from 3 to 25 years of age who had been inmates of the Sanatorium de Wald at Zurich:

| | | |
|---|---|---|
| Of 195 cases of mild severity, | 8.7% | had died. |
| Of 31 cases of medium severity, | 42.0% | had died. |
| Of 97 cases with severe lesions, | 85.5% | had died. |

Deep-rooted tradition, misplaced parental affection, and the absence of compulsory laws are said to make it difficult to secure proper care for children of tuberculous parents before it is too late. Recently, however, most people are realizing the significance of Grancher's principle, and the demand for preventorium care is rapidly increasing.

NORWAY

A Tuberculosis Act, passed in 1900, makes the notification of all cases compulsory. The doctor in charge is obligated to instruct the patient and to enforce the recommended precautions. If the patient is recalcitrant, he may be sent to a "Home for Consumptives," which is done particularly in cases where children are endangered, though the law does not yet permit the forcible separation of husband from wife. Each town and parish has its Tuberculosis Committee, responsible to a Central Tuberculosis Committee for the whole kingdom. Poor children of tuberculous parents are also placed in homes and institutions, in which case two-fifths of the cost is borne by the state, while the county and town in which they live bear the remainder. When the Tuberculosis Act was first enacted, no institution existed for isolating adult cases. The Norwegian Women's Health Association then collected funds and established, in 1903, a "Nursing Home for Tuberculosis" near Oslo, which has been followed by the establishment of 100 similar homes with a total of about 2,000 beds. Also, a special Home was opened for infants of tuberculous families, many of whom are received at birth. This is, in effect, the Grancher system, except that children are institutionalized instead of placed in private homes. Other devices, such as open air schools as we know them, are also in use. At present, an effort is being made to improve housing conditions for, as the author says, the infection may be *minimized by dilution* to those who live in daily contact with an infecting agent.

SWEDEN

The system in Sweden is essentially like that of Norway. An excellent demonstration was recently completed. It began in 1904 in a poor district of medium size, situated in a remote spot inhabited by a comparatively stationary population and infested with tuberculosis. Surrounding districts of similar type served as controls. The demonstration centered around a building serving as general headquarters, as well as a Cottage Hospital and Children's Home. In the twenty years' period, tuberculosis morbidity was reduced 33% and the mortality 28%, whereas practically no reductions were noted in morbidity or mortality in the control areas.

ENGLAND

In England, prominence is given to the view that infection may be prevented from developing into serious disease by raising the bodily resistance and by diminishing the strength or sizes of the infecting doses. Tuberculosis Village Settlements, such as Papworth at Cambridgeshire and Preston Hall at Aylesford, have demonstrated the feasibility of the idea. Papworth, established in 1916, is a colony or village settlement for tuberculous cases in the arrested or quiescent stage. The underlying idea is voluntary segregation. Training in some trade or craft is given while the colonist is under treatment or medical observation. Remunerative employment is offered, which enables the colonist to earn part of his income, the remainder being provided by the state as a subsidy. The colony provides at all times medical supervision and hospital facilities. Some of the colonists settle down with their families and remain for life. Thus, such a scheme provides medical care, remunerative occupation, and an optimistic atmosphere; the entire family may be supervised and the general public is protected.

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In all countries, of course, general measures, such as education of the public, sanitary regulations, the encouragement of better living standards, etc., are not neglected. In the United States, the drastic method of separating children from their families is not acceptable, the development of colonies is in its infancy, and mandatory laws are not popular.

COMPARISON OF DISEASE INCIDENCE IN CONNECTICUT WITH 1928 AND SEVEN YEAR AVERAGE MONTH ENDING DECEMBER 14, 1929

| DISEASES | 1929 | | | | | 1928 | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Wk. ending Nov. 23 | Wk. ending Nov. 30 | Wk. ending Dec. 7 | Wk. ending Dec. 14 | Average cases reported for week corresponding to Dec. 14 for past seven years | Wk. ending Nov. 24 | Wk. ending Dec. 1 | Wk. ending Dec. 8 | Wk. ending Dec. 15 |
| Anthrax | - | - | - | - | - | - | - | - | 1 |
| Cerebrospinal Men. | - | - | 1 | 9 | 1 | 1 | - | - | 5 |
| Chickenpox | 187 | 153 | 176 | 185 | 121 | 112 | 110 | 105 | 184 |
| Conjunctivitis Inf. | 5 | 2 | - | 1 | 1 | 5 | - | - | - |
| Diphtheria | 20 | 25 | 25 | 27 | 52 | 28 | 15 | 30 | 36 |
| Dysentery Bacillary | - | - | - | - | - | - | - | - | 2 |
| Encephalitis Epid. | - | - | - | - | - | - | - | - | 1 |
| German Measles | 7 | 2 | 5 | 10 | 8 | 17 | 10 | 7 | 16 |
| Influenza | 2 | 1 | 3 | 4 | 13 | 4 | 5 | 4 | 14 |
| Measles | 4 | 2 | 9 | 5 | 161 | 93 | 80 | 87 | 174 |
| Mumps | 14 | 21 | 39 | 42 | 41 | 81 | 24 | 33 | 124 |
| Paratyphoid Fever | 2 | - | - | - | - | - | - | - | - |
| Pneumonia (Broncho)* | 11 | 6 | 18 | 18 | 32 | 21 | 22 | 29 | 27 |
| Pneumonia (Lobar) | 15 | 29 | 20 | 43 | 38 | 21 | 27 | 37 | 50 |
| Poliomyelitis | - | - | - | - | 1 | 3 | 2 | - | 2 |
| Scarlet Fever | 45 | 52 | 66 | 83 | 94 | 51 | 31 | 38 | 55 |
| Septic Sore Throat | 2 | 2 | 2 | - | 3 | 3 | - | 1 | 2 |
| Smallpox | - | - | - | - | - | - | 7 | 1 | - |
| Trachoma | - | 1 | - | - | - | - | - | - | - |
| Trichinosis | - | - | - | 1 | - | - | - | - | - |
| Tuberculosis (Pul.) | 37 | 31 | 21 | 15 | 28 | 22 | 15 | 25 | 25 |
| Tuberculosis (O.F.) | - | 3 | 3 | 1 | 2 | 1 | 4 | 1 | 1 |
| Typhoid Fever | 5 | 3 | 4 | 1 | 2 | 3 | 3 | 8 | - |
| Typhus Fever | - | - | - | - | - | - | - | 1 | - |
| Undulant Fever** | 1 | - | - | - | - | - | - | - | - |
| Whooping Cough | 59 | 36 | 51 | 46 | 57 | 34 | 21 | 29 | 40 |
| Gonorrhoea | 35 | 28 | 86 | 41 | 21 | 41 | 42 | 27 | 24 |
| Syphilis | 28 | 41 | 78 | 59 | 23 | 35 | 49 | 52 | 49 |

* Made reportable January 1, 1925.
** Made reportable July 1, 1928.

REMARKS: No cases of Asiatic cholera, Glanders, plague, rabies in humans and Yellow fever during the past seven years.

## RÉSUMÉ OF COMMUNICABLE DISEASES IN MASSACHUSETTS, NOVEMBER, 1929

### GENERAL PREVALENCE

During November, 1929, the total number of reported cases was slightly below that for 1928.

The reported incidence of diphtheria was markedly high with more cases reported than for any November since 1924.

Chickenpox, showing the usual marked increase of the winter season, set a new high record.

The reported incidence of anterior poliomyelitis, lobar pneumonia, scarlet fever, pulmonary tuberculosis and whooping cough was within endemic limits. Similarly, the incidence of German measles, influenza, mumps, and non-pulmonary tuberculosis was normal.

Typhoid fever for the fourth consecutive month set a new low record. The incidence of measles was strikingly low.

Once more syphilis and gonorrhea were poorly reported, fewer cases of each disease being reported than for any previous November.

RARE DISEASES

*Anterior Poliomyelitis* was reported from Beverly, 1; Boston, 5; Cambridge, 1; Gill, 1; Haverhill, 1; Lowell, 2; Malden, 1; Manchester, 1; Marlboro, 1; Newburyport, 1; Quincy, 3; Sharon, 1; total, 19.

*Dysentery* was reported from Lowell, 3; Wellesley, 3; total, 6.

*Encephalitis lethargica* was reported from Chelsea, 1; Lawrence, 1; Melrose, 1; total, 3.

*Epidemic cerebrospinal meningitis* was reported from Beverly, 1; Boston, 2; Braintree, 1; Everett, 1; Fall River, 1; Gardner, 1; Holyoke, 1; Ipswich, 1; Lawrence, 1; Malden, 1; Quincy, 1; Worcester, 1; total, 13.

*Malaria* was reported from Chelsea, 3; total, 3.

*Pellagra* was reported from Boston, 1; total 1.

*Septic sore throat* was reported from Boston, 9; Brookline, 1; Haverhill, 1; Holyoke, 1; Leominster, 1; Lowell, 1; Malden, 1; Worcester, 2; total, 17.

*Tetanus* was reported from Boston, 1; Malden, 1; total, 2.

*Trachoma* was reported from Avon, 1; Boston, 4; Gardner, 1; Lowell, 1; Malden, 1; total, 8.

*Trichinosis* was reported from Pittsfield, 1; total, 1.

MONTHLY REPORT OF CERTAIN COMMUNICABLE DISEASES IN MASSACHUSETTS

| | Cases in Entire Population | | | | Case Rates per 100,000 Pop. | | |
|---|---|---|---|---|---|---|---|
| | Nov. 1929 | Nov. 1928 | Prosodemic Index | Epidemic Index | Nov. 1929 | Nov. 1928 | Expected Rate*** |
| ALL CAUSES | 5999 | 6262 | - | - | 136.9 | 144.8 | - |
| Ant. Poliomyelitis | 19 | 14 | 38* | .6** | .4 | .3 | .9 |
| Diphtheria | 556 | 359 | 394* | 1.4** | 12.7 | 8.3 | 9.0 |
| Measles | 395 | 1620 | 1332* | .3** | 9.0 | 37.5 | 30.4 |
| Pneumonia, Lobar | 267 | 241 | 306* | .9** | 6.1 | 5.6 | 7.0 |
| Scarlet Fever | 875 | 770 | 948* | .9** | 20.0 | 17.8 | 21.6 |
| Tuberculosis, Pul. | 382 | 367 | 381* | 1.0** | 8.7 | 8.5 | 8.7 |
| Typhoid Fever | 23 | 30 | 33* | .7** | .5 | .7 | .8 |
| Whooping Cough | 668 | 425 | 719* | .9** | 15.2 | 9.8 | 16.4 |
| Chicken Pox | 1306 | 935 | - | - | 29.8 | 21.6 | - |
| German Measles | 35 | 30 | - | - | .8 | .7 | - |
| Gonorrhea | 335 | 345 | - | - | 7.6 | 8.0 | - |
| Influenza | 25 | 35 | - | - | .6 | .7 | - |
| Mumps | 409 | 232 | - | - | 9.3 | 5.4 | - |
| Syphilis | 110 | 163 | - | - | 2.5 | 3.8 | - |
| Tuberculosis, O.F. | 59 | 46 | - | - | 1.3 | 1.1 | - |

* This Index is an attempt to estimate the number of cases based on the trend during the past year which can be expected to occur, and is for the purpose of comparison with the number of cases which actually did occur.

** This ratio expresses how prevalent the disease is compared with the index mentioned above; 1.0 indicates that the actual number of cases equals the expected number. A larger number means a greater prevalence, and a smaller number a lesser prevalence than expected. Thus, 2.0 would indicate twice the expected number of cases, and .5 half the expected number of cases. The method used to determine the indices is described in the August 18, 1927 issue of the Boston Medical and Surgical Journal.

*** Calculated from the Prosodemic Index.

## SICKNESS AMONG INDUSTRIAL EMPLOYEES DURING THE FIRST THREE MONTHS OF 1929

During the past nine years a group of approximately 35 sick-benefit associations in industry has reported to the United States Public Health Service the cases of illness and nonindustrial accidents causing disability for eight consecutive calendar days or longer among its members, and the monthly number of male and female members. These reports have been analyzed once a year, and the results have been made public from time to time by the Public Health Service. This material has afforded measurement and evaluation of several important factors affecting the frequency of different diseases and disease groups in a sample of the industrial population. It is realized, however, that a need also exists for some sort of current index of illness so that attention may be directed to the changing morbidity picture, and preventive effort mobilized to reduce the incidence of those diseases which are causing the greatest impairment to the health, vitality, and efficiency of the adult occupied population as indicated from the recorded sickness experience of a sample of that population.

A report recently published by the Service represents the first attempt to provide fairly current information on industrial morbidity. It was hoped that the sickness rates could be presented soon after the close of the first quarter for 1929, but tardy claims for sickness benefits, deferred diagnoses, and other reasons delayed the reports to the Public Health Service.

An increase of 38 per cent., compared with the

first quarter of 1928, is shown in the incidence rate of disabilities lasting more than one week. For the respiratory disease group an 86 per cent. increase in frequency is indicated, due, of course, to the influenza epidemic which was still raging in the early part of this year. Influenza itself was 163 per cent. more frequent than in the same period last year. The pneumonia (all forms) rate was only 28 per cent. above the rate of a year ago. Deaths in the industrial population of the United States and Canada followed the increased frequency of sickness. A large life insurance company reports an increase of 18 per cent. in the industrial death rate in the first quarter compared with the same part of 1928. The mortality rate appears to have been higher than during the first three months of any year since 1920. The combined influenza-pneumonia death rate showed an increase of 88 per cent. over the rate in the first quarter of 1928. Disabilities which lasted more than one week on account of influenza and pneumonia in our sample of the industrial population increased 147 per cent.

Sickness from nonrespiratory diseases as a whole occurred at much the same frequency in the two periods.—*United States Public Health Service.*

## THE ANNUAL MEETING OF MEMBERS OF THE CORPORATION AND OF THE BOARD OF DIRECTORS OF THE GORGAS MEMORIAL INSTITUTE OF TROPICAL AND PREVENTIVE MEDICINE, INC.

This meeting was held at 10:00 A. M., Wednesday, October 16, 1929, at the Stevens Hotel, Chicago, Illinois.

The roll call showed the following in attendance: Dr. Cary T. Grayson, Dr. Franklin Martin, Dr. Gilbert Fitz-Patrick, Dr. W. H. G. Logan, Dr. A. W. Blain, Dr. Herman N. Bundesen, Dr. George W. Crile, Dr. Bowman C. Crowell, Dr. Donald MacKay Gallie, Maj.-Gen. M. W. Ireland, Dr. Fred Bates Lund, Dr. C. Jeff Miller, Rear Admiral C. E. Riggs, Dr. Ernst A. Sommer, Dr. George David Stewart, Dr. Agnes Vietor, representing Mrs. Charles Sumner Bird, Mr. Henry S. Wellcome.

In addition to the Officers, Executive Committee and Board of Directors indicated on the first page of this report, the Scientific Board was elected, consisting of: Dr. Bowman C. Crowell, Chairman; Dr. C. C. Bass, Dr. Ernest William Goodpasture, Dr. W. G. McCoy, Capt. Charles S. Butler, Dr. William M. James, Lt. Col. J. F. Siler, and the Advisory Council was re-elected.

In the President's report of activities reference was made to the program which has been one of wide scope and has been instrumental in clearing the minds of the public, particularly in smaller communities and rural sections, as to the value of Scientific Medicine.

The results of the Field Campaign are as follows: 25 states have been contacted; 457 health talks have been made; a total audience of 148,346 has been addressed; 72 Gorgas Health Corps have been organized; 32 newspapers have been added to the Gorgas Syndicate through field effort; 525 Health Posters have been distributed by field workers; 55 showings of a health film have been arranged to a total audience of 29,243; 5 special radio talks have been made by field workers, in addition to the talks made regularly over the score of stations under contract to the Memorial.

This type of campaign has been very well received by the medical and dental professions as well as the laity.

In the plan of Gorgas Health Corps is seen a partnership between the medical and dental professions and the public. It is hoped that a comprehensive program for these groups may be worked out during the coming year.

A questionnaire has been sent out to determine to what extent the Gorgas Memorial has been instrumental in arousing increased interest in the Periodic Health Examination in the various communities that have been contacted. The first thousand replies indicate an average increase of 20% over last year.

### PRESS ACTIVITIES

A total of 55 papers has been added during the past year. Physicians, dentists, nurses, dietitians, hygienists, athletic directors and other health workers and writers have aided us in maintaining this service.

A health service has been inaugurated to a group of some 40 leading Labor papers of the country. This is considered a very valuable service as it carries authoritative health information to the working man. In this task the medical directors of large manufacturing plants, railways and insurance companies have assisted.

Special stories have been written for special occasions and for health journals. Many of the leading newspapers have given generous mention and radio talks were given in honor of the seventy-fifth anniversary of the birth of General Gorgas; many members and friends gave three minute tributes at their respective luncheon clubs; and most of the Health Corps held special meetings in honor of the occasion. In addition to the posters placed by field workers, 800 posters were sent to keymen for display in drug stores during Gorgas Week.

The maintenance and growth of the Field and Press programs have been made possible largely through the generosity of the Metropolitan Life Insurance Company.

### GORGAS ESSAY CONTESTS

Through the generosity of Mr. Charles R. Walgreen of Chicago, it was possible to launch the first national essay contest last spring. This contest was participated in by students in junior and senior classes of public high schools in 34 states. The subject was "William Crawford Gorgas, His Life and His Work," and many excellent manuscripts were received. On May 23, 1929, President Hoover, at the Executive Offices, awarded the first Charles R. Walgreen Prize of $500 to the national winner, Miss Gertrude Carter Stockard of Mountainburg, Arkan-

sas, in the presence of a distinguished company of guests. Miss Marguerite Hastings, of Watertown, Massachusetts, winner of the second national prize, received $150 in cash, $20 was awarded to each State winner, and a bronze Gorgas medallion was awarded to local high school winners.

The second national essay contest, which is to include parochial high schools, has just been launched, and was again made possible through Mr. Walgreen's interest. The subject this year is "The Gorgas Memorial; Its Relation to Better Personal Health and the Periodic Health Examination." Increased cash awards are offered to this year's contestants, and it is planned to honor the national winner with a ceremony similar to that last year.

### DEPARTMENT OF MOSQUITO CONTROL

Briefly, the following work has been done:

#### SUFFOLK COUNTY, NEW YORK

A committee of property owners requested the Gorgas Memorial to make a survey of this county, which includes over half of Long Island. This survey for the location and extent of mosquito breeding was made, and a detailed report, including requirements under the Gorgas Plan, was furnished the Committee. Special legislation for the accomplishment of this work is needed but there is assurance that it will be put through at the next session. It is estimated that $550,000 is needed to execute the plan.

#### TOLEDO, OHIO

A survey indicated that the cost of extermination under the Gorgas Plan is $250,000.

#### NEW YORK CITY

Engineers were instrumental in getting the Health Department to authorize a survey of all boroughs.

#### BOSTON

A law was framed and passed which carries a taxing provision. The Institute is to make surveys and outline the Gorgas Plan as called on.

#### MAINE

A survey of *Cranberry Isles*, just south of Bar Harbor, sixteen square miles of prolific breeding area was made. The work followed promptly under the Gorgas Plan and the area is now mosquitoless.

A survey of *Bar Harbor* has been ordered by the Chamber of Commerce. It is expected that all of Mt. Desert Island will be included in the survey.

The Board of Trade of *Old Orchard Beach* asked for and received a survey. The estimated cost of the work to be done is $16,500. It is planned to start this work next spring.

At the request of Judge Kenyon of the Supreme Court, Senator Edge and others, a survey of *Phippsburg Peninsula*, lying south of Bath, was made. The estimated cost of the work was $15,000. The work is now nearly completed.

The city of *Bath* will probably be next. The Governor of Maine is watching this work with great interest.

*Kennebunkport Beach* has asked for a survey. The Maine mosquito law, which was passed at the last session, is without teeth, and the Gorgas Memorial is assisting in the work of revising it.

#### ILLINOIS

Surveys have been made in Cairo and Crystal Lake but the work recommended has not been done as yet.

#### WISCONSIN AND MICHIGAN

In Milwaukee and in several communities in Michigan engineers have had conferences with city officials, by invitation, but surveys have not been authorized.

#### RHODE ISLAND

Survey of the Watch Hill section has been requested. No permanent mosquito control work has been done here since the war.

#### WILMINGTON, DELAWARE

The Associated Women's Clubs are making an effort to raise money sufficient to authorize a survey.

### GORGAS MEMORIAL LABORATORY

*Report of Director, Dr. Herbert C. Clark*

The keys to the building given to the Gorgas Memorial Institute by the Republic of Panama for use as a laboratory were handed to the Director during the second week in January of this year. This admirable building and the accompanying land lie between Santo Tomas Hospital and the Hospital de Panama. The plot occupies an entire block in the Exposition area of Panama City where most of the legations are located.

The gift of this ground and building is actually in exchange for the site originally donated by the Government of Panama, because it seemed unlikely that any adequate facilities for our work could be prepared in a reasonable length of time on the other location. This exchange of property was consummated in April and all possible legal steps have now been taken to get a deed recorded.

Since January the Director's time has been very largely consumed in adapting the building to the needs of the service. It was necessary to install water, sewage, gas, electric and telephone services, and to assemble furniture, library, apparatus and general supplies. All heavy apparatus is of necessity installed in the basement, since the wiring in the walls of the building only carries current for lights and small equipment. The Auditorium will seat 100 people and offers wall space for tables and book cases. Other library space can be provided in the corridors of the front wing. There is a laboratory room 27 by 25 feet on the first floor and four somewhat smaller laboratory rooms on the second floor.

Six temporary buildings that completely surrounded three sides of the laboratory have been removed and the site is being leveled and planted in a uniform type of grass. A one-story building 18 by 72 feet has been erected at the rear of the laboratory to serve as a storehouse, garage and animal house. A six-foot wall is being built to enclose the lot, leaving space around all four sides for the usual pavement which will be built by the Republic. There will be one gate in the wall on the 35th Street side.

Our library at present consists of 150 books of recent publication, 21 journals and a certain number of reprints and monographs. The library will, of course, need to be augmented and old records in particular will be required.

It was not deemed wise to assemble a professional staff until the building was equipped. A medical entomologist, Major L. H. Dunn, and your Director are the only professional members on the staff at present. During this construction period these two men have been engaged in making surveys within the Republic and the Canal Zone in order to find suitable outposts for our rural observations. Forty-five locations have been surveyed for malaria and for blood sucking insects. Camp equipment of a permanent nature has been assembled for our use in the uninhabited zones.

Our entomological surveys have yielded more than was expected in connection with mosquitoes, horse flies, sand flies, human ticks, fleas and lice. The malaria surveys have developed results that are interesting and have stimulated efforts to control the disease in rural units. Our laboratory has also been able to assist in certain problems connected with animal industry in Panama.

Our first organized expedition into an uninhabited area occurred during the month of July. We spent about three weeks in the virgin jungle on the boundary line between Costa Rica and Panama. The object of this trip was to study insect life that had no contact with people and to make a careful survey for parasites of the blood in wild monkeys. It is believed that we have found a new screw-worm fly on this trip and eight species of horse flies that have not been recorded for this country. Furthermore, two of the four species of monkeys captured revealed malarial parasites that cannot be distinguished from human malarial parasites in peripheral blood films.

The construction and organization period has now reached the stage where attention can be directed more intensively to the scientific program. It is hoped that some field experiments in malaria can be carried out during the coming year in connection with the Madden Dam project on the Chagres River. Rural units in the Republic of Panama and in the plantation of the United Fruit Company also offer us fields.

The Government of Panama has recently issued a decree making your Director honorary consultant to its hospitals. This will afford the opportunity needed for most of our mosquito biting experimental work, on carriers of malaria. It is now desired to supervise the pathological department of Santo Tomas Hospital. That laboratory has been performing from 40 to 50 autopsies a month and most of the material is being lost at present since the position of pathologist is vacant. The Government of Panama would be willing to place this department under the control of the Gorgas Memorial Laboratory. Much material concerning tropical medicine passes through that laboratory. It is suggested that the Gorgas Memorial Institute open negotiations with the Republic of Panama to select a pathologist for Santo Tomas Hospital in order to gain the use of their material and to assemble valuable autopsy records. This pathologist will be a member of the staff of the Gorgas Memorial Laboratory, but under the executive direction of the Santo Tomas Hospital, which will supply quarters and subsistence.

Another member should be added to our staff who can cover the work in protozoölogy, parasitology and bacteriology. This man should be of recognized ability and able to perform the duties of assistant director of the Laboratory.

A man of ability in veterinary research should also be added to the staff. Col. Siler, Chief Health Officer of the Panama Canal, sees this need in his service and it is hoped that the veterinary corps of the United States Army will be able to detach such an officer for service in our Laboratory. Our organization is extremely fortunate in having Col. Siler in Panama. His advice is valuable to us and his interest in our work is keen.

A staff of technicians will be needed now and this will require at least one man well enough qualified to teach and direct others. We are able to get as temporary technicians for use in our Laboratory men who are on leave from the Canal Zone service.

For field administrative assistance within the Republic of Panama I suggest that we place on our staff Dr. G. Parades of Panama City. He could be of service as an Associate Field Director or Liaison Officer between our organization and the Interior of the Republic of Panama. He occupies the position of Chief Health Officer of the Republic of Panama and the President of the Republic has granted him permission to add this duty to that of his public office.

It is also suggested that the vacancy now existing on our scientific board be filled by naming Dr. William M. James of the Hospital de Panama as a member.

The following scientific problems are either under investigation now or will be undertaken during the coming year:

1. Study of human carriers of malaria immediately following the treatment of an acute attack of malaria fever. Mosquito biting experiments during the course of the patient's treatment with quinine, plasmochin, etc.

2. Transfer experiments with monkey and human species of malaria to determine whether the monkey is an animal reservoir for human malaria.

3. Mosquito biting experiments to test the infectibility of other anophelines than the three commonly incriminated species in our tropics.

4. A study of anopheline flight habits throughout the day and night under various seasonal conditions both in the wild and domestic regions.

5. A study bearing on the number of egg mats that anopheline mosquitoes may deposit. There is some reason to believe that they survive more than one egg batch.

6. Establish mosquito indices of malarial infection on anopheline catches indoors and outdoors, both in wild and domestic regions.

7. Some experiments bearing on possible sand fly vectors of unexplained fever epidemics that occasionally occur on the Atlantic side of the Canal Zone.

8. Experiments with two species of human ticks as possible carriers of relapsing fever.

9. Experiments with horse flies in connection with equine trypanosomiasis. Our entomological surveys have shown where the larval stage of two species of horse flies are past. As far as we can learn this information is entirely new.

10. Southern cattle fever (piroplasmosis) will receive some attention in connection with imported non-immune dairy stock.

## PROPOSED GEORGE ROBERT WHITE HEALTH UNIT

George E. Phelan, manager of the White fund, presided. The invocation was by the Rev. Fr. Joseph Heaney of St. Joseph's church, and Mayor Nichols and Councilman John I. Fitzgerald of the West end and Health Commissioner Mahoney were among the speakers.

The exercises, following the actual laying of the corner stone were held in the old ward room on Blossom street, adjacent to the site of the new unit, and the location of the first unit established under the White fund. It was in the West end that the experiment of health units was tried and its success led to the establishment of five permanent buildings in as many districts of the city. After the completion of the new building, the old ward room will be turned back to the city.

The new building will be of four stories, 60 by 108 feet, with the principal entrance on Blossom street. The cost will be $250,000 for the building and $72,000 for the site. On the first floor will be clinic, dental and rest rooms and complete service for fluoroscopy, radiography and heliotherapy and in the basement will be a cafeteria and storage rooms. The auditorium on the second floor will seat 200 and will have a stage and motion picture equipment. The offices will be located on the third floor where welfare organizations serving the West end will have quarters.

The fourth floor will have a large glass roofed enclosed space where classes for pre-school age children will be held.

## THE INTERNATIONAL UROLOGICAL SOCIETY

Attention has been directed to the International Urological Society by an announcement that some of our Boston members expect to attend the next meeting which will be held in Madrid in April, 1930.

This Society was organized in 1919 in Paris and has conducted meetings every three years. Up to the present time all of the meetings have been held in Europe. The Boston members are Drs. J. H. Cunningham, A. L. Chute, W. C. Quinby, R. F. O'Neil, G. G. Smith and J. D. Barney. Dr. F. S. Watson is classified as "Senior Member".

It is reasonable to expect that this Society will select the United States as a meeting place in the near future because scientific organizations are looking to this country for demonstrations of advanced work and its people as hospitable fellow workers.

# CORRESPONDENCE

## REREGISTRATION OF PHYSICIANS

December 24, 1929.

Editor
NEW ENGLAND JOURNAL OF MEDICINE:

There has been considerable confusion in reference to the requirement of registering of physicians. I believe the enclosed letter will clarify this situation. I have gone over this matter carefully with a member of the State Board of Registration of Medicine to be sure that the statements are true.

Sincerely yours,

GEORGE H. CROSBIE.

RE: REGISTRATION AT CITY OR TOWN HALL

Every licensed Doctor is required by law to register when he first opens an office. This has been a legal requirement for years.

1st. If you have not registered already, do so at once.

2nd. If not sure whether you have registered or not, write the Board of Registration in Medicine, State House, Boston, and enclose a stamped return envelope.

3rd. If you are unable to find your certificate of registration as a physician, you can obtain a certified statement from the Board of Registration in Medicine (Room 144, State House Annex) by the payment of a fee of one dollar. This will be accepted by the town (or city) clerk as equivalent to the original certificate.

4th. Place to register, City Clerk's Office, City or Town Hall.

5th. Register in the city you practice, not your residence.

6th. In Boston, City Hall, School Street, second floor, Room No. 32.

7th. Take with you, your Massachusetts certificate of registration as a physician.

8th. Fee 25c.

9th. Fine for not registering $5.00 to $100.00.

10th. Do it Now. It is good *Insurance.*

11th. If you have offices in more than one city, register in each.

12th. If you practice out of town during the summer, you must register there also.

13th. If you move your office in the same city, no registration of such change need be given, but if you move your office from one city to another, you must register again.

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## RESOLUTIONS RESPECTING FEDERAL AIRPLANE PILOTS' LICENSES

Department of Commerce
Aeronautics Branch
Washington

The Editor
NEW ENGLAND JOURNAL OF MEDICINE,
165 Newbury Street,
Boston, Massachusetts.

*Dear Sir:*

The attached resolutions were passed by the American Medical Association at its stated assembly held at Portland, Oregon, in July, 1929. It is believed that these resolutions are of sufficient interest in view of the rapidly increasing number of physicians designated as Medical Examiners to warrant publication in your journal.

You may be interested to know that all applicants for federal pilot licenses, either flying or for training as pilots, must pass physical examinations before physicians designated by the Secretary of Commerce. They must likewise be re-examined periodically. These examinations cover a rather detailed examination of the eyes, a brief examination of the ear, nose and throat, equilibrium, a general physical examination, and a detailed examination of the nervous system. There are now about 750 Medical Examiners so designated throughout the country. All these examinations are reviewed in Washington where the applicant is finally certified as qualified or disqualified for the grade for which he has applied.

Very truly yours,
L. H. BAUER, M.D., *Medical Director.*

*Whereas*, The Aeronautics Branch, Department of Commerce, has organized a medical service for the physical examinations of civil pilots and prospective pilots, in the interests of safety; and

*Whereas*, The physical standards adopted are in keeping with those adopted universally, and have reduced aircraft accidents from physical causes to a minimum; and

*Whereas*, The department has required these examinations to be made only by designated physicians in the interests of uniformity and control and in accordance with the custom adopted for the Army and Navy and in other countries; and

*Whereas*, The selection of examining physicians by the department has been based on training as flight surgeons or its equivalent, or on group examinations by specialists, a high standard of examination has resulted; and

*Whereas*, The department requires that all examiners hold the degree of Doctor of Medicine, be licensed to practice medicine under the laws of their respective states, and further requires that the appointees be recognized as ethical practitioners in their respective localities, thereby supporting the high standards advocated by this Association, be it

*Resolved*, That the American Medical Association at its stated assembly in 1929 endorses the medical work of the Department of Commerce, its methods of physical examination and its method of selection of medical examiners, and urges that the same high standards be continued and offers the support of the American Medical Association in furthering the specialty of aviation medicine; and be it further

*Resolved*, That a copy of this resolution be sent to the President of the United States, the Secretary of Commerce, and the Secretary of each state medical society.

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## THE CHANGE OF THE NAME OF THE MASSACHUSETTS HOMOEOPATHIC HOSPITAL

Massachusetts Homoeopathic Hospital
Henry M. Pollock, M.D.
Superintendent
East Concord Street, Boston 18

December 26, 1929.

NEW ENGLAND JOURNAL OF MEDICINE:

To give appropriate recognition to its several memorials and to better indicate its liberal policies, the name of the Massachusetts Homoeopathic Hospital has been changed to the

MASSACHUSETTS MEMORIAL HOSPITALS

December 19, 1929

Enclosed please find a statement which was prepared for the daily paper and sets forth at greater length the reasons for the change in the Hospital's name, and its future plans.

Thinking that you might desire to make notation of this change of name in the columns of your magazine and that you might wish to know something of the Hospital's service, I am sending you this statement.

Very truly yours,
HENRY M. POLLOCK, M.D., *Superintendent.*

On November 6, 1929 the members of the Corporation of the Massachusetts Homoeopathic Hospital voted to change the name of the Corporation and the Hospital from the Massachusetts Homoeopathic Hospital to the MASSACHUSETTS MEMORIAL HOSPITALS, and, in the construction of its new hospital group on Commonwealth Avenue Heights, to establish and maintain a unit to be known and designated as The Hahnemann Memorial.

In January this hospital will have completed its fifty-sixth year of service to the community. These years have witnessed its growth from a hospital of 14 beds to one of 530 while the number of patients who annually have occupied them has increased from less than one hundred to more than ten thousand. These years have also witnessed much of the progress of

modern medicine, with which the Hospital has ever kept pace. Therefore a name which well characterized the Hospital's work on its inception and during the earlier years of its activities, has long since ceased to do so.

In the choice of a new name for the hospital, cognizance has been taken both of its present composition and the plans for its future expansion. The Hospital now maintains and operates the Robert Dawson Evans Memorial, the Jennie M. Robinson Memorial and the John C. Haynes Memorial. Each of these Memorials from their size and distinctive work might well be regarded as independent hospitals. On the removal of the Hospital to its new location, an additional memorial, The Hahnemann Memorial, will be created where opportunity will be afforded for the practice and teaching of Homoeopathy, thus giving a fitting and enduring recognition to the contribution that Homoeopathy has made to the Hospital.

With the further development of this Medical Center, in conjunction with Boston University School of Medicine provision will be made for continuing and expanding the diversified work of the hospital through the creation and erection of other and suitable memorials.

Thus associated will be a number of individual Memorial Hospitals with a common management operating as a co-ördinate whole under the Hospital's new name "Massachusetts Memorial Hospitals".

The Hospital's new site is truly an ideal location for a large metropolitan hospital. But a few minutes removed from railroad and business centers, its location and extent—some thirty acres—assures absolute freedom from traffic and other disturbing noises. Its elevation, 180 feet above sea level, provides a wonderful panoramic view over Boston and its surroundings, with freedom from dust and smoke. With wide frontages on Commonwealth Avenue, Washington and Warren Streets and the projected extension of Monastery Road it is readily accessible by automobile over non-congested avenues of approach and by trolley and bus service.

On this new site, with enlarged and modern buildings, under its new name,—the Massachusetts Memorial Hospitals—the Hospital plans to continue in name as it has in fact its present very liberal policies and to further extend that philanthropic work which has caused it to be known far and wide as a truly charitable institution. This change in name became effective on December 19, 1929.

## ARTICLES NOT ACCEPTABLE FOR NEW AND NON OFFICIAL REMEDIES

Toxogon, Von Winkler Laboratories, Inc., Chicago.
Acid Iron Mineral Compound (A-I-M), Acid Iron Mineral Percolating Corporation.
Allenrhu, Alle-Rhume Remedy Company.
Nozol, Nozol Company, Inc.
Lane's Cold Tablets, Kemp and Lane, Inc.
Asceine: Serra, Garabis and Company.
Zonite, The Zonite Products Company.
Fildrysine, Drug Company.
Jayzon's Laxative Cold Tablets, D. C. Leo and Company, Inc.
Quicamphol (Transpulmin), Chemisch-Pharmazeutische A. -G., Bad Homburg, Germany. Sold in the United States by Spicer and Company.
Antiustio, Frederick Laboratory, Toledo, Ohio.
Unguentum Carbonis Comp. (Hilf), Hilf Products Company, Brooklyn.
Day's Asthma Powder, William D. Day and Company.
Munyon's Grippe Remedy, The Munyon Remedy Company.
P. and R. Chlorine Bombs, The National Research Corporation.
Bronchuletts, The International Laboratories.
Thompson's Grippe and Cold Tablets, The Owl Drug Company.
Meyer Red Diamond Salve, The Meyer Bros. Drug Company.
Si-Nok, The Si-Nok Company.
Eagle Menthol Inhaler, The Eagle Druggists Supply Company.
Cre Sot Rub, The Drain Chemical Company.
Nox-Mal-A, The Savodine Company.
Rising Mist Salve, Wynn's Rising Mist Company.
Grains of Health, Grains of Health Products Company.
Taylor's Laxative Cold Tablets, C. E. Jamieson and Company.
Uterine Catholicon, The Graefenberg Company.
Hermance's Asthma and Hay Fever Medicine, C. A. Bell.
Draper's Rub, The Memphis Chemical Company.
Laxa-Pirin, The Hoosier Remedy Company.
Nash's Croup and Pneumonia Salve, Nash Bros. Drug Company.

*Council on Pharmacy and Chemistry.*

## RECENT DEATHS

**GRANGER**—Word has been received of the death at New Rochelle, New York, on December 22, 1929, of Dr. Frank Clark Granger of Randolph. He was visiting his son, L. Dwight Granger, at the time of his sudden death. Dr. Granger was born at Randolph, Vermont, April 8, 1849 and therefore was eighty years old when the end came. After graduating from the Vermont state normal school in 1865 he taught school for several years and then entered the University of Vermont School of Medicine, graduating M.D. in 1877 and later taking a second degree in medicine from Dartmouth Medical School in 1881. The following year he settled in Randolph, Massachusetts, joined the State medical society and practised there until last year when his name was placed on the retired list. He was the father of the late Dr. Frank Butler Granger, the eminent physio-therapeutist of Boston. His widow, who was Miss Alice M. Butler, survives him.

**SAWYER**—Dr. Edward Allen Sawyer, medical examiner of the second Worcester County district, died December 24, 1929, at his home in Gardner while telephoning a friend. He was 72 years old.

Dr. Sawyer was a graduate of the New York University Medical College, New York City, in 1883. He settled in Gardner and joined the Massachusetts Medical Society serving that society as Nominating Councilor from the Worcester North District forty years later.

Dr. Sawyer was a member of the staff of the Henry Heywood Memorial Hospital, a member of the Gardner Boat Club, the Gardner Rotary Club, the Massachusetts Medical Society, Worcester North District Medical Society and the Massachusetts Medico-Legal Society. He is survived by his widow, Myra, and a son, Dr. Edward J. Sawyer, formerly of Andover, and now of Newton, a Fellow of the State Medical Society; a daughter, Mrs. Marjorie Rossy of Gardner, and two grandchildren.

**WAITE**—Dr. Lucy Carleton Reed Waite died at her home in Southbridge of pneumonia, December 27, 1929. The daughter of Dr. William G. Reed and Harriet Otis Reed, she was born at North Brookfield, 47 years ago. Educated in the Southbridge high school, she was a graduate of Cornell University Medical College, New York, in 1907 and settled in Southbridge the following year, when she joined the Massachusetts Medical Society, then being Lucy Carleton Reed.

She had a large practice, latterly devoting herself largely to obstetrics, and was highly thought of in the town. She was a Fellow of the American Medical Association.

Dr. Waite is survived by her husband, Ernest S. Waite, to whom she was married in 1915, and by three sons.

## OBITUARIES

### WILLIAM FAIRFIELD WARREN

William Fairfield Warren, President Emeritus of Boston University, died of pneumonia at his home in Brookline on December 6, after a brief illness. He was born at Williamsburg in 1833, received his A.B. degree from Wesleyan University in 1853, and was graduated at Andover Theological Seminary in 1856, being ordained to the ministry in 1855. He spent two years of study in Germany at Berlin and Halle and was a professor at Bremen from 1860 to 1866. Upon his return to this country he became acting president of the Boston Theological Seminary, and with the founding of Boston University, became its first president, serving until 1903, when he resigned to become dean of the School of Theology.

His interests in education were of the broadest kind, and his annual reports as president show how closely he followed progress in all of the University departments. He was particularly interested in the School of Medicine. He had watched the struggle of the New England Female Medical College in its endeavor to open this field to women and when, on the death of Dr. Gregory, the institution ". . . bankrupt in finances, but with a noble history, this historic child of men's ungenerous exclusiveness and of men's inadequate chivalry, was laid as a sickly and perishing foundling upon the doorstep of Boston University", he hastened to bring about its adoption.

The elevation of standards in medical education received his hearty support and encouragement at all times, and we note the pride with which he referred to the radical departure in the curriculum of the School of Medicine when three years of graded instruction was not only offered, but required for graduation. And again when this requirement was increased to four years, his annual report stated that both undertakings were the first in America.

He was on friendly and intimate terms with the leaders of his time in art, literature, philosophy and education and he was able to exert a powerful influence for intellectual progress.

His death closed a long and fruitful period of successful service and marks the passing of one more of the outstanding figures of the foundation period in American education.

### A TRIBUTE TO DR. EDWARD NORTON LIBBY

BY THE BOSTON CITY HOSPITAL STAFF

The Boston City Hospital was founded to care for the sick poor of Boston and in the death of Edward Norton Libby we of the Staff feel that we have lost a man who particularly exemplified this principle, for he labored untiringly and indeed happily to alleviate the suffering of those in need. A man of scientific attainment, but pre-ëminent as a clinician he gave unstintingly of his time and ability. As a teacher many of us will remember him as demonstrating the art as well as the science of medicine, for in the hospital ward as well as in the sick room his presence was kindly and comforting. His comments on a patient's condition, while they were concise and entirely logical, yet contained that note of optimism which in itself is helpful. In consultations perhaps three characteristics were outstanding,—his sympathy, his modesty, and a keen judgment founded on that rare virtue, common sense.

Those of us fortunate enough to have met him at his home remember perhaps vaguely the particular errand which brought us there but much more clearly and with quiet, deep pleasure we recall the epilogue to these meetings. To have walked with him through his dahlia garden while he pointed out a particularly beautiful variety of "Polar Star" or an "Insulinde" which was reverting, or to have listened to him discuss plans for his next year's tulip bed,—this is an intimate and comforting recollection.

In the trying position of a court expert his knowledge was respected and his opinions known as meticulously honest. As a teacher he was loved and respected by his students and by other instructors. In the practice of medicine his skill and unselfish labor gave help and comfort to numberless sufferers and that, to a physician, is a sacrament with plenary grace.

P. F. Butler, *Secretary Senior Staff.*

December nineteenth
Nineteen hundred and twenty-nine.

## NEWS ITEMS

APPOINTMENT OF MISS D. M. CURRIER—Miss Della M. Currier, who has been Assistant Superintendent of Nurses at the Boston City Hospital for ten years, has been appointed Superintendent of Nurses at that institution.

She served as a nurse in the World War.

THE APPOINTMENT OF DR. T. A. HOCH—Dr. Theodore Augustus Hoch has been appointed superintendent of the Massachusetts State Hospital for Mental Diseases at Northampton.

Dr. John A. Houston, superintendent of this hospital for many years, resigned July 31, 1929, because of having reached the age limit of seventy.

Dr. Hoch has been associate commissioner of the Massachusetts State Department of mental diseases and was formerly assistant superintendent of the State Hospital at Worcester.

HARVARD MEDICAL SCHOOL NEWS—The following appointments were made public by the dean's office on December 16, 1929:

*New appointments*—One year from September 1, 1929: Hyman Allan Novack, M.D., Assistant in Medicine; Jessie Reed Cockrill, M.D., Research Fellow in Medicine; Frank Christian d'Elseaux, M.D., Research Fellow in Psychiatry; George Armitage, M.B., Research Fellow in Surgery; Gaston Louis DeCoppet, M.D., Research Fellow in Surgery; William Robert Henderson, M.B., Research Fellow in Surgery.

*New appointment*—From November 15, 1929 to September 1, 1930: Julius Goddard Kelley, M.D., Charles Follen Folsom Teaching Fellow in Hygiene.

*New appointment*—From November 1, 1929 to September 1, 1930. Sidney Matthew Greenberg, M.D., Research Fellow in Medicine.

*New appointment*—From November 25, 1929 to September 1, 1930: Paul Martin, M.D., Arthur Tracy Cabot Fellow in Surgery.

*New appointment*—From December 1, 1929 to September 1, 1930: Mangala Smaya Mengtid (Certified doctor—Siam), Research Fellow in Pediatrics.

NEWS OF TUFTS COLLEGE MEDICAL SCHOOL—The Theta Chapter of the Delta Sigma Theta Fraternity at the Tufts College Medical School held its initiation exercises at the fraternity quarters December 11. The following pledges were initiated: Maurice Jacobs, Jacob Sheinkopf, Maurice Rothman, Benedict Kudish, Harry Goodman, Samuel Feiner, Norman Popkin, David Levine, and I. Waldman. An elaborate program of entertainment followed the fraternal rites and many honorary members, alumni, and active school members were present and participated. The initiation committee consisted of Max Goldstein, chairman, Alexander N. Fisher, Harold Goldenberg, and Charles Silverstein.

The rites were administered by Dr. Max Gross, the chancellor, who gave an interesting talk on the relation of fraternalism toward the medical profession and the Medical School.

The Theta Chapter of the Delta Sigma Theta was founded at the Tufts Medical School six years ago by Dr. Samuel Gargill, of Boston. It has made tremendous progress, now having seventy-five practicing physicians as alumni throughout the Eastern States, some of whom are outstanding in the profession.

This year's program consists of regular monthly meetings at which lectures and talks are delivered by prominent physicians on current medical topics, followed by general discussion in which all members participate. The last meeting was held at the Lenox Hotel, in Boston, at which Dr. I. R. Jankelson, Gastro-Enterologist at the Boston City Hospital and the Beth Israel Hospital, also a Tufts alumnus, spoke on the "Relation of Diet to Gastro-Intestinal Diseases." In addition, Dr. Abraham Rudy, of Boston, a graduate of the University of Berlin and an associate of the Blood Laboratory at the Beth Israel Hospital, delivered a talk on "Recent Advances of Medicine in Diabetes."

DR. ALLAN WINTER ROWE ADDRESSED THE LORD LISTER SOCIETY—Dr. A. W. Rowe, Director of the Department of Biological Chemistry of Boston University, and The Evans Memorial, delivered an address on Endocrinology at a meeting of the Lord Lister Society, December 18, 1929.

This society is composed of students of the medical and dental schools of Harvard, Tufts, and Boston University. The membership exceeds one hundred and meetings are held monthly.

## NOTICES

### ASSIGNMENT OF SURGEON CARL RAMUS

Dr. Ramus has been relieved from duty at Calais, Maine, and assigned to duty in charge of immigration work at East Boston, Mass. December 17, 1929.

### REMOVALS

Dr. D. C. Patterson and Dr. I. L. Harshbarger announce the removal of their offices from 144 Golden Hill Street to the Professional Building, 881 Lafayette Street, Bridgeport, Conn.

## REPORTS AND NOTICES OF MEETINGS

### THE HARVARD MEDICAL SOCIETY

The Harvard Medical Society held a meeting in the Peter Bent Brigham Hospital Amphitheatre on Tuesday evening, December 10, 1929 at 8:15 o'clock. After the presentation of cases Dr. S. B. Wolbach introduced Dr. Harvey Cushing, Moseley Professor of Surgery at the Harvard Medical School, who spoke on "The Chiasmal Syndrome."

Dr. Oldberg presented two neurological cases illustrating the different ways in which a lesion of the same kind, in practically the same place, will manifest itself. Both patients were married women in

early middle life. The first patient presented a history of lues and failing vision for a year. Examination showed diminished visual acuity, a large bump in the right parietal region, swelling of the optic nerve heads, and a large lesion evident by x-ray. The second patient gave a five-year history of some numbness and loss of strength on the left side gradually increasing. Her visual fields placed the lesion in the same place as in the first patient, even though there were no eye signs and the x-rays were negative. On operation both lesions were found in practically the same place and of the same kind.

Dr. Hahn presented a medical case. The patient was a 23 year old Italian, American-born, fruit peddler who entered complaining of fever and weakness of nine days' duration. Family and past history were essentially negative. Four months before he had an attack of fever, profuse sweating, and malaise lasting three days. Two months ago he had a similar but worse attack lasting six days in which he had anorexia and emesis. After each attack he got up feeling not so strong as before. Nine days before entry he started to have another still more severe attack and called his doctor. His temperature ranged between 101° and 105°, his appetite was poor, he vomited almost everything solid, and retained fluids with difficulty. Quinine gave some relief. Physical examination disclosed moderate pallor, weakness, very moist smooth skin, moderate general adenopathy. Clinical pathology showed slight secondary anemia, moderate leucocytosis, a high fever, negative blood cultures and stools, and serum for testing for bacillus melitensis was negative. On the ninth day in the hospital he was given quinine and then his temperature showed a tendency to come down. In the last three days he had been fairly normal. Despite the negative serum tests for bacillus melitensis, the case is regarded as one with that infection.

Dr. Cushing opened his address by presenting the clinical history of a trained nurse, aged 50, who complained of failing vision. The history was essentially negative otherwise, while physical examination showed some optic atrophy with bitemporal field defects. The sella turcica was normal by x-ray. In such a case the localizing diagnosis is certain, but the pathological diagnosis obscure and can only be made by exposing the region of the chiasm. Thus, Dr. Cushing pointed out that primary optic atrophy with bitemporal hemianopsia coming on in a middle-aged person and showing a normal sella constitutes what he calls "the chiasmal syndrome."

The common lesion to produce optic atrophy and bitemporal hemianopsia is a pituitary adenoma but these tumors almost invariably cause enlargement of the sella. The mechanical pressure of these adenomas against the chiasm causes the disturbance in vision. Thus, the mechanical treatment by removal is indicated. The approach is either made by the transsphenoidal route or transfrontally from above. The latter procedure has been gradually perfected of late years so that now, in going in to look for presumed pituitary tumors, one finds occasional tumors of other sorts in this region which can be dealt with.

An optic atrophy resulting from direct pressure against the optic nerves or chiasm is called primary in contradistinction to secondary optic atrophy caused by pressure of a distant tumor which increases the tension of the cerebro-spinal fluid. The visual field defects vary considerably, but on the whole they tend toward bitemporal hemianopsia. It is remarkable, Dr. Cushing pointed out, that upon removal of pressure from a completely white nerve head visual impulses are again immediately transmitted showing that atrophy does not mean destruction.

Tumors in this region may cause other important symptoms. The water balance regulation may be upset producing diabetes insipidus. Damage to the lower part of the third ventricle may cause drowsiness and hypersomnia. The carbohydrate metabolism may be disturbed leading to adiposity. The centre for thermoregulation may be damaged causing a lowered temperature and basal metabolism. These primary fundamental centres are all grouped together in this part of the diencephalon.

On operating the surgeon hopes to find a supraseller meningioma because the removal is comparatively easy and the cure premanent. There are other conditions giving the same symptoms, however, among which Dr. Cushing listed pituitary adenomas, cranio-pharyngeal pouch cysts, the chiasmic glioma of children, and aneurysm. The differential diagnosis of these various conditions is not yet clean-cut, but more and more is being learned about them.

Dr. Cushing illustrated his points with many lantern slides made from actual cases.

## GREATER BOSTON BIKUR CHOLIM HOSPITAL

A meeting of the staff of the Greater Boston Bikur Cholim Hospital was held at the Hospital December 16. This was the first get-together of the entire visiting and consulting staffs of this institution and about thirty-five physicians attended. Dr. S. Richmond made the address of welcome.Dr. Abraham Myerson, Professor of Neurology, Tufts Medical School, gave a talk on "Reflexes." His lecture was extremely interesting and instructive. Mrs. Ida Cooper made a short address in which she outlined the work of the ladies of the Greater Boston Bikur Cholim Association and thanked the physicians of the staff both for their co-öperation in organizing the hospital and in carrying on the work of the hospital. A collation was served by Mrs. Grossberg, Mrs. Cooper, and Miss Ruven, the Superintendent of the hospital. It is planned to hold these meetings at frequent intervals and to have prominent members of the medical profession address the gathering on medical or allied subjects.

## BRISTOL COUNTY ORTHOPAEDIC CLUB

The Clinical Meeting of the Bristol County Orthopaedic Club was held at the Fall River General Hospital, Stanley Street, Fall River, Mass., December

30, 1929 at 8:15 P. M. The following cases were presented by Drs. Burt, Kaufmann and Hussey.

1. Four cases of Traumatic Sacro-iliac Dislocation.
2. Four cases of Fracture of the Scapula.
3. Neuropathic Bone Lesions and vascular diseases of the Extremities.
4. Unusual pathology of the Right Knee joint.
5. Polydactylism.

EARLE E. HUSSEY, M.D., *Secretary.*

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## THE NEW ENGLAND PUBLIC HEALTH INSTITUTE

The Massachusetts Department of Public Health announces the next annual New England Public Health Institute which will be held in Boston, April 14 to 18, 1930.

The innovation of holding clinics for the medical profession at the Health Institute was suggested by the wide interest shown by physicians in the cancer clinics recently held in Boston.

Physicians will be interested to know that:—

I. Dr. John H. Stokes of the Department of Dermatology and Syphilis, University of Pennsylvania, School of Medicine will be a speaker.

II. Dr. P. S. Pelouze of the Department of Urology, University of Pennsylvania School of Medicine, will be a speaker and will conduct a clinic on the treatment of Gonorrhea in the Male.

III. Dr. Hugh Cabot, Dean, University of Michigan Medical School, will conduct a clinic on the surgical treatment of post-gonorrheal conditions.

IV. Dr. Thurman Givan of the Department of Obstetrics and Gynecology, of The Long Island College Hospital, Brooklyn, N. Y., will be a speaker and will conduct a clinic on the treatment of syphilis in pregnancy.

V. Dr. A. K. Paine of the Tufts Medical College and the Boston Dispensary, will conduct a clinic on the treatment of Gonorrhea in the Female.

VI. Dr. Thomas Parran, United States Public Health Service, Dr. G. H. Coombs, formerly in charge of Venereal Disease Control in Maine, Dr. Cecil Drinker of the Harvard School of Public Health and Dr. Alfred Worcester of Harvard University will also speak upon various factors in the Control of Gonorrhea and Syphilis and upon the general subject of Social Hygiene.

The preliminary program will be available soon.

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## GREATER BOSTON MEDICAL SOCIETY

A joint meeting of the Greater Boston Medical Society and the Beth Israel Hospital will be held on Tuesday, January 7, 1930, at 8.15, at the Beth Israel Hospital.

PROGRAM

Dr. Abraham Colmes, "A Visit to European Anaphylaxis Clinics."

Dr. B. M. Fried, "Primary Cancer of the Lungs."

Discussion: Dr. M. J. Schlesinger, "Its pathological aspect." Dr. Harry F. Friedman, "Its roentgenological aspect."

LOUIS SILVER, M.D., *Secretary.*

483 Beacon Street, Boston, Mass.

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## ESSEX NORTH DISTRICT MEDICAL SOCIETY

The 88th semi-annual meeting of the Society will be held at Centre Church vestries, Main street, corner of Vestry street, opposite City Hall, Haverhill, on Wednesday, Jan. 8, 1930. (Telephone 548.) Dinner will be served at 12:30 p. m. sharp. Following the dinner the business meeting will occur.

After the business meeting these papers and a symposium on Obstetrics are scheduled:

1. Robert B. Greenough, M.D., of Boston, President of the Massachusetts Medical Society, will speak upon the Society's affairs.

2. The Section on Obstetrics and Gynecology, through its chairman, Louis E. Phaneuf, M.D., of Boston, will show two motion picture reels upon Face Presentation and Breech Extractions, and a talk of explanation. (1 hour.)

3. Frederick C. Irving, M.D., of Boston, Assistant Professor of Obstetrics at Harvard University Medical School, upon "Caesarean Section." (30 minutes.)

Thomas W. Murphy, M.D., of Lawrence, will open the discussion upon the reels and Carleton W. Bullard, M.D., of Newburyport, upon Caesarean Section.

Discussion from the floor is invited.

Roland L. Toppan, M.D., *President.*
Jan. 2, 1930.

J. FORREST BURNHAM, M.D., *Secretary.*
567 Haverhill St., Lawrence, Mass.

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## NEW ENGLAND HEART ASSOCIATION

The New England Heart Association will meet January 16, 1930, 8 P. M., at the Peter Bent Brigham Hospital Amphitheatre.

PROGRAM

I. The Psychoneurotic Problem in Heart Disease. Dr. John A. P. Millet, Stockbridge.

II. Circulatory Disturbances in Organic Neurological Conditions. Dr. James B. Ayer, Boston.

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## MASSACHUSETTS GENERAL HOSPITAL

A Clinical Meeting of the Staff of the Massachusetts General Hospital will be held on Thursday, January 9, 1930, at 8:15 P. M., in the Moseley Memorial Building.

PROGRAM

1. Presentation of Interesting Cases.
2. Diaphragmatic Herniae Associated with Secondary Anemia. Dr. A. V. Bock.
3. Discussion of the subject of Diaphragmatic

Hernia with Moving Picture Demonstration. Dr. P. E. Truesdale, Fall River, Mass.

Doctors, Nurses and Medical Students are cordially invited to attend.

COMMITTEE ON HOSPITAL MEETINGS.

## SOCIETY MEETINGS, CONGRESSES AND CONFERENCES

**1929-1930**—Massachusetts Dietetic Association. Complete schedule appears on page 852, issue of October 24.

**January 6-7**—The Sectional Meeting of the American College of Surgeons. Detailed notice appears on page 1324, issue of December 26.

**January 7**—Greater Boston Medical Society. Detailed notice appears on page 55.

**January 9**—Massachusetts General Hospital. Complete notice appears on page 55.

**January 16**—The New England Heart Association. Detailed notice appears on page 55.

**February 3**—American Heart Association. Complete notice appears on page 1181, issue of December 5.

**February 10-14, 1930**—American College of Physicians. Complete notice appears on page 853, issue of October 24.

**March-October, 1930**—International Medical Postgraduate Courses in Berlin. Complete notice appears on page 853, issue of October 24.

**April 14-18**—The New England Public Health Institute. Complete notice appears on page 55.

**September 4-8, 1930**—Fifth International Congress on Physiotherapy. Complete notice appears on page 906, issue of October 31.

**October 27, 1930**—The American Public Health Association. Detailed notice appears on page 1271, issue of December 19.

### DISTRICT MEDICAL SOCIETIES

#### Essex North District Medical Society

**January 8, 1930**—Wednesday—Semi-annual meeting at Centre Church Vestries, Main Street, corner of Vestry Street, opposite City Hall, Haverhill, (Telephone 548) at 12:30 sharp. Detailed notice appears on page 55.

**May 1**—Thursday—Censors' meeting at Hotel Bartlett, 95 Main Street, Haverhill, (Telephone 3430) at 2 P. M. sharp. Candidates should present their diplomas to the Secretary one week in advance.

**May 7**—Wednesday—Annual Meeting.

J. FORREST BURNHAM, Secretary.

#### Essex South District Medical Society

**Wednesday, January 8, 1930**—At the Beverly Hospital Clinic 5 P. M. Dinner 7 P. M. Speaker: Dr. Harry H Germain, Boston. Subject: "Some Aspects of Cancer of the Colon." General Discussion from the floor.

**Wednesday, February 5, 1930**—Council Meeting, Boston.

**Wednesday, February 12, 1930**—Danvers State Hospital, Hathorne. Clinic 5 P. M. Dinner 7 P. M. Speakers: Dr. Winfred Overholser. Subject: "Criminology and Psychiatry." Mr. Clark, District Attorney for Essex County, who will speak on the legal aspect.

**Wednesday, March 5, 1930**—Lynn Hospital. Clinic 5 P. M. Dinner 7 P. M. Speaker: Dr. R. S. Titus, Boston. Subject: "Some Aspects of Caesarean Section," illustrated with Moving Pictures. General Discussion from the floor.

**Wednesday, April 2, 1930**—Hotel Hawthorne, Salem. Dinner at 7 P. M. Speaker: Dr. Timothy Leary, Boston. Subject: "Diagnostic and Therapeutic Pitfalls in Intracranial Pyogenic Infections."

**Thursday, May 1, 1930**—Censors meet for Examination of Candidates at Salem Hospital at 3:30 P. M.

**Tuesday, May 13, 1930**—Annual Meeting. The Tavern, Gloucester. Speaker: Dr. C. Macfie Campbell, Director of Boston Psychopathic Hospital. Subject to be announced later. Ladies invited. Dancing.

R. E. STONE, M.D., Secretary.

#### Franklin District Medical Society

The meetings of the Franklin District Medical Society will be held at the Weldon Hotel, Greenfield, Mass., on the second Tuesdays of January, March and May, at 11 A. M.

CHARLES MOLINE, Secretary.

#### Hampshire District Medical Society

Meetings of Hampshire District will occur at 11 A. M. the second Wednesdays of February and April and will be held at the Dickinson Hospital, Northampton. The annual meeting will be held in May.

LUTHER O. WHITMAN, M.D., Secretary.

#### Middlesex East District Medical Society

**January 15**—At Boston, Harvard Club.

**March 12**—At Melrose.

**May 13**—At Unicorn Country Club, Stoneham.

ALLAN R. CUNNINGHAM, Secretary.

#### Middlesex South District Medical Society

Winter meetings—jointly with Suffolk District.

**April 16, 1930**—Annual meeting. Commander Hotel, Cambridge. Program to be announced.

**May, 1930**—Censors' meeting.

ALEXANDER A. LEVI, Secretary.

#### Norfolk District Medical Society

**January 27, 1930**—Roxbury Masonic Temple. "Recent Advances in Diagnosis and Treatment of Syphilis." The speakers will be Drs. C. Morton Smith and Austin W. Cheever.

**February 24, 1930**—Roxbury Masonic Temple, 8:00. Dr. Edwin H. Place has been invited to read a paper and has been given carte blanche in the selection of his subject.

**March 24, 1930**—Roxbury Masonic Temple. Dr. Burton E. Hamilton. Subject to be announced.

**May 6, 1930**—Annual Meeting. Program to be announced.

The Censors meet for the examination of candidates, May 1, 1930, in the Roxbury Masonic Temple, 171 Warren Street, Roxbury, at 4:00 P. M.

Applications must be in the hands of the Secretary at least one week previous to date of examination.

Owing to inability to engage the Roxbury Masonic Apartments on the last Tuesday of the month, such meetings as will be held in the Roxbury Temple will be held Monday evenings as per the dates above.

FRANK S. CRUICKSHANK,
Secretary, Norfolk District Medical Society.

## BOOK REVIEW

*Haemorrhoids* by Arthur S. Morley, F.R.C.S. Eng. Late Temporary Assistant Surgeon to St. Mark's Hospital for Cancer, Fistula, and Other Diseases of the Rectum. Published by Oxford University Press. Price $2.00.

This little volume presents in concise, convincing style the author's personal experience with injection treatment of internal haemorrhoids. Based upon over fifteen years' use of this method, Dr. Morley champions wholeheartedly injection therapy as against operation. The latter he considers very rarely necessary for internal haemorrhoids. In support of this view various statistics are quoted, both of surgeons in respect to operation, and his own figures in regard to injection. His complications are much fewer and he has no mortality. Though admitting the probable efficacy of other solutions, he has found no reason for using other than phenol 20% in equal parts of glycerin and distilled water, occasionally using a 10% solution if the former causes discomfort in a particular individual. There is no contra-indication, as a rule, to injecting all the piles at one sitting, and treatments are given once a week, usually to the number of four or five in each pile.

In the appendix of the book, Dr. Morley describes an improved technique which he thinks may supplant the old method. It consists of the injection of 5% phenol in almond oil, using larger amounts (½ to 1½ c.c.) and injecting high up submucously instead of into the center of the pile. More injections are required. The oil remains unabsorbed for a considerable time, producing some pressure on the vessels as well as setting up the usual aseptic inflammation.